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TABLE OF CONTENTS

Editorials	
The open door	55
Parliament and Psychiatry	57
The Use of Hypnosis in Psychiatry	
<i>F. W. Hanley, M.D.</i>	59
Adrenal Cortical Stress Effects in Senility.	
II The Response to Heat Stimulation Produced by the	
Hardy-Wolff-Goodell Dolorimeter	
<i>B. Grad, Ph.D., and V. A. Kral, M.D.</i>	66
Thought Disorder and Retardation in Schizophrenia	
<i>R. W. Payne, Ph.D.</i>	75
Parkinsonism and the use of Tranquilizers	
<i>C. W. Gowdey, Ph.D. and K. S. Forster, M.D.</i>	79
Quelques aspects theoriques de la psychiatrie en Russie et autres pays de	
l'Europe de l'est	
<i>T. A. Ban, M.D., et J. St. Laurent, M.D.</i>	88
Some Observations on the "Open Door" in Canadian and other hospitals	
<i>F. R. Wake, Ph.D.</i>	96
Book Reviews	103
Correspondence	105

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2. All papers presented at the annual scientific session of the Canadian Psychiatric Association should be submitted to the Secretary at the close of the meeting. Prior right of publication rests with the Association.
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Editorials

THE OPEN DOOR

The article on "Some Observations on the 'Open Door' in Canadian and Other Hospitals", written by Dr. F. R. Wake, which appears in this issue of the Journal is an able and penetrating study of the 'open door' development.

The opening of the mental hospital doors and the giving to the psychiatric patient the same degree of freedom and responsibility under medical care which we afford to all other patients—along with the new attitudes on the part of the staff and the community attendant upon this—constitute one of the most forward steps taken in psychiatry within our times.

The psychiatrist has long had the unhappy distinction of being the only medical man to lock up his patients. Indeed the day is not far behind us when the newly engaged architect regularly sought to impress the mental hospital superintendent by revealing to him the skillful half-hidden measures he had set into the plans for the new psychiatric building to ensure maximum security: the windows one simply could not break—the doors with cunningly devised locks—the peepholes—the stairways without wells—the recessed lights and the walls on which nothing could be hung or hanged.

Yet, strangely enough, this denial of freedom to the patient did not always dominate mental hospital practice. Almost one hundred years ago, there was much enthusiasm for the opening of mental hospitals and this is discussed by Dr. J. E. Gilbert in an article on "The Open Door Philosophy: Reflections from the Past" in the Medical Services Journal, No. 9, 1959.

In the year 1879, Dr. James Rutherford, the first superintendent of the Woodilee Hospital in Lenzie, Scotland, wrote "Mainly through fully occupying the patients and thereby counteracting the tendency to manifestation of their insane ideas, it has been found practicable to carry out the open-door system of treatment. All the doors in the Asylum open with ordinary handles, and only the chief attendants are in possession of a key. I am not aware that this system is so fully carried out in any other large public Asylum. No untoward event has yet occurred to lead me to change my opinion, that, by the diminution of apparent restrictions upon liberty, greater quietness and contentment are secured, which has its effect in promoting recovery and improvement. This is the first Asylum that has yet been erected without walled airing courts, and the want of them has never been felt to be a disadvantage."

How did it come about that an 'open door policy' was set up over 100 years ago? What led to its abandonment and why is it now coming to the fore again? Certain conjectures require to be followed up:

May the abandonment of this policy have been due to the exceptional increase in size of the mental hospitals during the last three-quarters of a century? From studies of industrial organizations, we are aware that as an industry grows, personnel tend to be managed on a mass basis and impersonality comes to predominate. With this goes a most considerable amount of discontent. Indeed, this problem has become so urgent that it has been necessary to initiate research

into means of combatting such effects. From our own experience, we can recognize that when a hospital expands from 500 beds to a 1000 and to 2000 and perhaps on upwards to 5000, the staff finds it increasingly convenient to manage the patients in large groups and, in these large groups, individual needs become lost. At the same time, the ratio of staff to patient declines and the human factor is still further attenuated.

Another element which may have led to the disappearance of the earlier 'open door policy' may well have been the growth in the size of political units; again with a loss of a sense of direct responsibility on the part of legislators for what happened in the mental hospital or to what extent they used staff positions for political patronage. An additional factor which may well have contributed is the very progress which was being made in the rest of medicine which tended to draw off as doctors, as nurses, as technicians and male attendants many of the best of those entering the medical field.

This disappearance of a favourable state of affairs in a society which is in many respects progressing—and its later reappearance—is not unknown. For instance, the very progress achieved by the industrial revolution for a time greatly impaired the health and even the survival rate of its child population until the time of Shaftesbury, when legislation was introduced in England setting safeguards against the employment of children in industry. Moreover, the growth of urbanization, while raising the wage scale of the former rural workers thus drawn into the cities, at the same time and until the situation was corrected, actually decreased the health level of the workers by cutting down on the much better rounded diets they previously had had in the farming areas.

As to why there has now been a return of strength to the 'open door policy', one may note that this coincides with the rise in importance of the behavioural

sciences and with a rise in interest on the part of the community as expressed in a great range of legislation concerned with social security. It is important for us constantly to keep in mind that our mental hospitals do not stand as edifices in isolation, but they are part of the community in which they exist. The attitudes, aspirations and customs which are dominant in a community express themselves in a great span of ways, such as the manner in which the community deals with its aged—with its orphans—with its indigent sick. They are therefore also reflected in the way with which it deals with its psychiatric patients.

There is an urgent need to set up research studies to discover why the 'open door policy' set up in earlier times disappeared and yet has begun to appear again in greater strength. Unless we understand how this came about, another shift in public attitudes may wipe away what we at this time consider to be the great gains made by restoring to the psychiatric patient his sense of freedom and of dignity.

Dr. Wake's article already referred to, which appears in this issue, reports on a most careful study carried out by the Department of National Health and Welfare upon progress made across the country with respect to the 'open door' in mental hospitals, and it is proper that the outstanding leadership furnished by the Department in this manner—which has been of such pivotal importance to the progress of psychiatry—should be recognized.

This matter was first brought forward by the Department of National Health and Welfare at a meeting of the Advisory Committee on Mental Health in February, 1955 and it was recommended to the then Minister of the Department "That a move should be made towards the opening of the doors of the mental hospitals as fast as local circumstances would permit, and that a progress report be made annually upon it". At a subsequent meeting on November 19, 1956 more

specific recommendations were made. With considerable courage and foresightedness, the Minister—as has his successor—supported the recommendation that “The operating of all hospital facilities on an unlocked basis is an ultimate objective of psychiatry”. At the same time, this resolution was forwarded to the Canadian Psychiatric Association, the Canadian Mental Health Association, the Canadian Medical Association, the Canadian Hospital Association, the Canadian Commission on Hospital Accreditation and the Royal College of Physicians and Surgeons of Canada.

How great has been the influence of this stand taken by the Department is well illustrated in the rapid progress described in Dr. Wake's paper. This country may indeed be proud of the reputation which its psychiatric hospital

services are achieving in restoring to the patient his sense of worth and dignity, his feeling that he is no estranged outcast, but rather a member of a family—troubled it is true but because of his trouble the recipient of the utmost care and solicitude by his doctors and nurses, by his family and the community pending his return to health and work. In the opening of mental hospital doors, the administrator and the clinician unite in an enterprise which is matchless in medicine in its fortunate consequences for the patient. For the leadership given by the Department of National Health and Welfare for the resolution, for the courage of the administrators and the medical staffs of the psychiatric hospitals, the citizens of this country owe an abiding debt of gratitude.

D.E.C.

PARLIAMENT AND PSYCHIATRY

In the last few months events have occurred in the field of national Government and politics which may well have profound importance for all psychiatrists. The first of these events was the presentation in December of a brief by the Canadian Mental Health Association to the Prime Minister and members of his Cabinet. This brief strongly urged the adoption of policies long advocated by the CPA, including, for example, the extension of hospital insurance to cover mental hospitals, the increase of mental health grants for research training and new services, the bringing up to date of all federal legislation referring to psychiatric illness, particularly the Immigration Act, the Penitentiaries Act and the Criminal Code, and the strengthening of the Division of Mental Health in the Department of National Health & Welfare by (among other things) improving the status of the Director of Mental Health Services. The brief was received with interest and has been referred to subse-

quently in debate in the House of Commons.

Second, and coincidentally, within a few days of the presentation of this brief, a resolution was placed on the Order Paper for debate in the House. This was a resolution originally composed in 1956 by Claude Richardson Q.C. of Montreal, who was then a member of Parliament. When Mr. Richardson was defeated in the last election his resolution was sponsored by Mr. Alan Macnaughton, Liberal Member for Montreal-Mt. Royal. The resolution read as follows:

That, in the opinion of this house, the government should consider the advisability of co-operating with the provincial authorities and such professional and other groups as may be interested, in making a national survey of the extent of mental illness, its causes, problems and methods of treatment.

It was significant that this resolution was debated for a full day in the House. Twenty-two members spoke to the issue and all supported the resolution in prin-

ciple. The resolution was finally accepted by the Minister of Health & Welfare, Hon. Waldo Monteith. That a private member's resolution coming from the Opposition benches should receive this kind of interest and be accepted unanimously by the House, is surely remarkable.

We may quibble about the wording of the resolution, it may be more important now to remove some of the roadblocks and resistances which are preventing the implementation of what we know should be done in the way of improving psychiatric services, rather than to conduct another survey. It can also be argued that there are committees and groups now in existence who are studying the pattern of treatment services with a view to recommending more practical and effective methods. The so-called "Tyhurst Committee" of the Canadian Mental Health Association is one of these, for example, and a report from this committee is expected shortly.

Nevertheless, the debate on the Macnaughton resolution served in a unique way to focus national attention on our field. It also revealed the fact that there were many members of the House who, while sincerely interested, were not as well informed as they might be, and indeed, as they would like to be.

One significant development has already occurred. The National Liberal "Rally" accepted Mr. Macnaughton's proposed mental health platform, which is a definite improvement on his own resolution. It contains, among other items, most of the recommendations which were in the Canadian Mental Health Association brief.

The third development which is of major importance is, of course, the announcement concerning the appointment of a Royal Commission on Health Needs. Although it has been announced that the

Chairman of this Commission will be Chief Justice Hon. Emmett Matthew Hall of Saskatchewan, the names of the other commissioners and terms of reference are not available at this date. Nevertheless it is very obvious that the Commission will have a wide scope and that recommendations affecting the mental health of Canadians will be welcome.

Canadian psychiatrists have not always been anxious or willing to take advantage of opportunities to present their views before official bodies of this kind. It is sometimes even difficult to establish committees either of the CPA or of provincial associations, who are willing to devote the necessary time and effort for search and survey and the preparation of significant statements concerning psychiatric matters. This time the opportunity is too important to miss. The problem of treatment of mental illness has for too long suffered the neglect of a complacent and uninformed public. For too long the psychiatric profession has struggled, usually without success, against inadequacies of remuneration, restrictive personnel policies and unsatisfactory conditions of work. For too long it has been frustrated by the fact that it has known how to provide much better services than most of the present provincial programs will allow.

This time we must prepare ourselves properly. Hours of long hard work lie ahead for committees at both provincial and national level. Briefs must be prepared in which Canadian psychiatry presents its message clearly. The voluntary associations can be counted on to provide supporting testimony. This time let us make sure that we grasp the chance so clearly provided to ensure that mental illness and mental health receive the attention and concern they deserve and must have.

J.D.M.G.



THE USE OF HYPNOSIS IN PSYCHIATRY*

F. W. HANLEY, M.D.¹

We are constantly reminded of the need for more effective methods in psychiatry, and particularly in psychotherapy, to shorten the treatment process. Often psychotherapy is a long and tedious process for both therapist and patient. Often, too, it may take hours to assure oneself that goals must be limited and to determine what those goals must be. Various methods are used to accelerate what must, in any case, be a time-consuming learning process, e.g., E.C.T. to "increase accessibility", intravenous drugs to produce verbalization and abreaction. Anything which can bring the process nearer to its irreducible limits is welcome.

Hypnosis is one such valuable method, applicable for a number of purposes. It does not of itself eliminate the necessity for work or discomfort on the part of the patient, it is no painless circumvention of difficulties on the therapeutic road, but its intelligent use does achieve a shortening of the therapeutic process by reduction or elimination of the detours and road-blocks which inevitably beset the path of treatment, and by directing the therapeutic process.

Hypnosis has been used in many so-called primitive cultures, but its modern use dates from Mesmer, who employed it as a cure-all. In the early part of the 19th century Elliotson and Esdaile achieved remarkable results in surgery, using it for anaesthetic and analgesic purposes. During the latter part of the same century hypnosis was used extensively for the removal of symptoms by direct suggestion. Janet was the first to exploit its value to recover painful dissociated memories and to re-integrate them into consciousness. Morton Prince and Breuer developed it similarly, the latter emphasizing the value of the

catharsis produced. Freud found hypnosis useful to uncover the causes of symptoms and to abreact the repressed affects, but gave it up when he found he could hypnotize only a few people (he was, in fact, a poor hypnotist). His overt rejection of hypnosis caused an almost complete cessation of activity in the field until about the middle of this century, when Lindner, Wolberg (5,6), Brenman and Gill and others brought psychoanalysis and hypnosis together in what has been called hypnoanalysis. In this method, hypnosis is used as an accessory technique. Fox has recently suggested that the integration can be carried one stage further, and that hypnosis can be used as an integral part of the therapeutic process (3).

A number of misconceptions about hypnosis are still prevalent in the medical profession, even among psychiatrists, and these have hindered and are still delaying the fullest use of the method in the treatment of illness.

1) Hypnotic induction is too time-consuming to make it practicable. This is largely a matter of skill, and the majority of patients can be brought to a useful working level in 5-15 minutes in the first session. In subsequent sessions only a few minutes are required for induction. Only a few patients are more resistant, and most of these can be induced in an hour or two with the application of special techniques.

2) A deep or somnambulistic trance is necessary for effective use of hypnosis. A medium or light trance is adequate for most hypnotic therapeutic techniques. Direct symptom removal, if desired, can be achieved by repeated suggestions during a light trance.

3) The hypnotized patient is a passive automaton who takes no active role in the treatment process. Wolberg showed in 1945 that this is primarily the result

*Presented at the Annual Meeting of the Canadian Psychiatric Association, Banff, June 18, 1960.
¹Calgary, Alta.

of the operator's attitude and that patients, when allowed to do so, will move and talk so freely during a trance that they may not be thought to be hypnotized. The patient retains his defences at all times, but in the hypnotic state has more direct access to his unconscious. He can take as active a role in the treatment process as the therapist wishes and his existing limitations allow.

4) The removal of symptoms by direct suggestion is only temporary, and such symptoms will either recur or be replaced by substitute symptoms. With a permissive technique some symptoms can be permanently removed by direct suggestion. Moreover, with the correct technique it is relatively easy to distinguish between symptoms which will safely respond to such suggestions and those which require an uncovering technique.

5) The use of hypnosis causes over-dependency of the patient on the therapist. The development of over-dependency in any therapy is a function of the therapist's attitude, and if it occurs in a treatment in which hypnosis is used, it is not the result of the hypnosis per se. We all know doctors, not only in psychiatry, who encourage a womb-like atmosphere in their offices, in which the patients are soothed and given the latest oral medications on a demand-feeding schedule. If a psychiatrist does not maintain such a consulting-womb, the use of hypnosis will never cause a dependency problem. The correct use of hypnosis, in fact, can not only avoid such a problem where one might tend to occur, but can actually develop independence.

Erickson has pointed out that the hypnotic state confers at least three advantages which facilitate the process of psychotherapy⁽¹⁾.

1) Hypnosis allows a degree of objectivity of the patient about himself, even amounting to dissociation, not otherwise easy to obtain. This is of great value in approaching affect-laden areas for preliminary or intensive exploration, and

also for collating a series of experiences of similar meaning, giving the patient a kind of wide-angle view of his difficult life situations and his neurotic responses to them.

2) Receptivity is specific, i.e., free of associated or implied ideas. Thus the patient can focus his performance precisely to his needs. Re-education is greatly accelerated by this quality.

3) Ideas can be examined for their intrinsic value rather than for secondarily acquired meanings, hence the patient can take advantage of all his experience. Erickson adds that, with the use of hypnosis, the patient is able to participate more fully in his own recovery.

Hypnosis is used chiefly in the treatment of psychoneurotic problems. Procedures vary from one therapist to another, and a wide variety of techniques are available, both for induction and therapy. It is best to have a relatively simple induction procedure which can be used with confidence, plus two or three alternatives for use in refractory cases or unusual situations. Hypnosis is not begun until careful study of the patient and his problems has been made, and tentative opinions formed of his neurotic solutions and his defences. This does not differ from the usual approach to the patient, and all I am saying is that one does not begin treatment before one knows whom and what one is treating. At the appropriate time the method is introduced to the patient, usually by name. A few years ago a large percentage of patients were fearful of hypnosis and had many misconceptions about it, but recently, with the wider dissemination of knowledge, most accept it quite matter-of-factly or are pleased. Some patients ask for hypnosis, and of course there is the obvious trap here, that such patients may be looking for a short-cut, a magic cure. This would put hypnosis in the same unhappy and frustrating role as the tranquilizers in the treatment of the psychoneuroses. Some of these requests,

however, are quite legitimate. In any case, whether the patient accepts hypnosis or not, a brief discussion is given, in which misconceptions are explored, and the characteristics of the hypnotic state described. In some cases where it is suspected that the patient might reject hypnosis, especially if he is very anxious, he is simply told that he can be helped best in this initial phase of his treatment by learning to relax, an idea to which he has almost certainly been conditioned by the advice of his previous medical advisors, clergymen, friends, business associates and every magazine in the country. A progressive relaxation method is demonstrated for a few minutes, he feels better, and then can be told that he could be helped still further by going on into hypnosis, and that he was in fact, already in the preliminary (hypnoidal) stage. I have never encountered any opposition to this approach.

Personally, I do not engage in any training sessions preparatory to therapy, artificially separating hypnosis and treatment, but begin work in the first hypnotic session, no matter how light the trance. This gives the patient confidence in the procedure and hastens the development of a deeper trance, besides losing no time in the therapeutic task.

A wide variety of therapeutic techniques are available and a hypnotherapist should be acquainted with a number. Some of the more useful are hypermnnesia for the recall of past experiences, age regression, visualization of a stage or TV screen or crystal gazing for the projection of problems, automatic writing and other ideomotor responses, dream production, intensification of emotion, production of artificial neurosis, and posthypnotic production of dreams and insights. Symptoms may also be temporarily suppressed to see where the energy is discharged (4). Any and all hypnotic phenomena are used. The patient's cooperation is always enlisted, and care is taken never to uncover painful areas until the patient is ready. This

may mean getting the patient's agreement while in hypnosis to work on his problem in the interim before the next session, or even having him set a time when he will be ready to deal directly with his difficulty and bring about a resolution. There are also the ingenious devices developed by Erickson (2) for use when complete treatment is not advisable or practical—helping the patient to function as adequately and constructively as possible while keeping his neurosis. Erickson's techniques put the symptoms to various uses: thus, he employs symptom substitution, symptom transformation, symptom amelioration and corrective emotional responses.

Sessions with the patient in full awareness should alternate with those using hypnosis. Material uncovered should be fully integrated and, even more important, changed attitudes consolidated, before proceeding to the next stage. This, of course, varies from individual to individual and the rate of progress must be determined largely by the patient.

Uncovering techniques may also be combined with direct suggestions. This is useful in psychosomatic conditions, e.g., to relieve spasm or pain or control symptoms while deeper therapy is progressing. In such cases, as in any other, the direct suggestions are not given as orders, but as possibilities or probabilities which the patient can reject if necessary. This is the so-called permissive suggestion, which is never traumatic.

Illustrative Cases

In my own practice I have found hypnosis valuable, sometimes indispensable, in a number of areas. The category of uses given here is of course arbitrary, and there is overlapping. Perhaps several uses will be indicated in the same patient at different stages of therapy.

Use No. 1.

To stimulate movement. Hypnosis may assist here by increasing rapport and verbalization, by bringing out new, often

unconscious, material, and by circumventing defences.

1) A 31-year-old married man with two children complained of progressive insomnia and severe pruritis ani of several months duration. His feelings toward his daughter, age three, were affectionate but toward his fourteen months-old son were obviously ambivalent, and his relation to his father, with whom he was in business, was one of hostile dependency. He had always worshipped the father "from afar" but at the same time felt dominated by him. He was defensive and covertly fearful of the therapist in interview, and it was obvious that considerable time would be spent beating around the bush.

He accepted hypnosis, which was begun in the second session, with some apprehension, but achieved a good trance. Review of his difficulties brought out no new associations, and it was suggested, with his agreement, that he work on his problem before the next session. He began the subsequent interview by saying he felt that he must have homosexual feelings. There followed a flood of information regarding the affection he had had for his father in childhood, and of the pleasure he had experienced in getting into bed to sleep with him up to age thirteen or fourteen. At that time he had homosexual relations with his cousin for a short period. His latent homosexuality had been stirred up by the birth of his son. In spite of this insight, he remained somewhat emotionally detached and began to become defensive again, e.g., he wondered if he were on the right track and what relevance his anal itching had. In the next hypnotic session age regression was used (he was allowed to select an age of his own choosing), his strong feelings for his father were brought out and he experienced intense anal pruritis. The problem was thus brought to an effective feeling level, and as expected he developed a strong transference with homosexual undertones. As a result of this he

now requested hypnosis. This was interpreted to him as a desire for vicarious homosexual gratification, and the transference was discussed. Half a dozen sessions without hypnosis were used for working through his problem, and he has remained well for one and one half years.

This case illustrates 1) rapid uncovering of the problem, 2) mobilization of affect, 3) avoidance of misuse of hypnosis. This patient would in any case have attempted to use the psychiatrist for vicarious gratification, and his asking for hypnosis where formerly he had feared it allowed easy identification of this manoeuvre.

Use No. 2.

To remedy or improve undesirable personality traits, to bring about disuse of motiveless habit patterns and to strengthen new and more appropriate ones.

A 32 year-old married woman asked for referral because of stealing since age ten. She was terrified of being found out. She stole trivial things from stores and relatives, episodically, and suffered extreme guilt. She had been a lonely, shy child whose parents expected a great deal of her. The mother wanted her children to be popular and the patient felt she could never be as good as her older sister. She was poorly motivated in general, inconsistent, passive, ran away from difficulties, and had poor personality organization. She needed approval, felt she should never ask for gifts because she did not deserve them, felt constantly inadequate. Earlier satisfactory accomplishment during school years indicated deterioration from a previous level of ego strength.

Little material was produced spontaneously and the patient shortly dried up completely. The obvious interpretations about the need to take what she felt she could never ask for produced agreement but no change in behaviour. Hypnosis was used for strong, emphatic suggestions of confidence, adequacy and capa-

city to organize her duties. She was told that she could take initiative, operate efficiently, and enjoy life if she wished. Nothing was said about her stealing. Response was fairly rapid. In eight interviews (three months) she mobilized her potential, feelings of inadequacy gradually subsided, she was able to accept the approval and affection of others, including her husband, without guilt and her need to steal disappeared completely. There has been no recurrence for two years.

Use No. 3.

To overcome specific single symptoms or disabilities by use of suggestion only.

Julio Dittborn has pointed out that in some cases the hypnotic state itself or simple suggestion will get rid of a symptom, perhaps because it has outlived its conflict. Many straightforward examples could be given. The one offered here is a little out of the ordinary.

A 45 year-old professional man complained of "bladder spasm" from age fifteen. He felt he wanted to urinate immediately he was in any situation where this might be difficult, e.g., a closed room, a theatre or a football game, and quickly developed discomfort amounting to near panic. The careful precautions he had to take or the actual avoidance of many situations severely handicapped his life. Being made president-elect of his professional organization caused him to seek treatment. He was an only child of very religious parents, and married. He blocked completely on sources of conflict. He was difficult to hypnotize but by the use of fractionation and increasing emphasis on self-induction, he achieved a satisfactory trance in two one-hour sessions. Following this, although no exploration had been made and no specific suggestions regarding his condition had been given, (he was simply told that he could get well), he reported a marked decrease in symptoms — he had stopped his habit of looking for the bathroom as soon as he entered a home, he could go

into any situation without trouble, and was able to walk from his parking lot to his office without wondering if he would make it. It was decided to continue this non-specific approach, partly because his plans for a long holiday would interrupt any other type of therapy. He completed a total of eight sessions (2 months) before leaving, and at this time was quite symptom-free and skilled in the use of self-hypnosis, which he employed only before any major stress. Uncovering therapy was planned on his return but as he has remained well and as there is little time in Calgary to see any but the most seriously ill, this has not been pursued. He has been well for the past eight months.

This case is of interest because of the almost complete giving up of a neurotic symptom of thirty years duration in a person with very strong defences, with the use of general suggestions only. It is not known if this was a flight into health or if the symptom had become motiveless and was persisting autonomously. In any case, this patient has achieved a new and better functioning equilibrium which promises to be stable. One wonders if lengthy psychotherapy would have achieved this result, and if there is any point in considering it now unless the patient relapses.

Use No. 4.

To differentiate functional and organic states, and to determine the nature and extent of the functional overlay.

A 35 year-old woman complained of "terrible noise in the head causing bad nerves" which had begun eleven years before, after the birth of her first child. A diagnosis of Menière's disease had been made by several competent physicians. An ear specialist had also diagnosed hearing loss when her condition became worse 3-4 months before being seen, but it was not certain if this was due to organic disease or to functional overlay.

She readily reached a deep trance, in which it was found that her hearing was

good and she was able to disregard completely the sounds in her head. It was then suggested that in the waking state she would be able to hear normally and this was so, when tested with the whispered voice from behind.

Other diagnostic problems where hypnosis can be invaluable are differentiation of hysterical paralyses and pareses from neurological lesions and the distinction of symbolic from organically produced pain. So far as therapy is concerned, it is my opinion that hypnosis is the treatment of choice in hysteria and the dissociative states.

Use No. 5.

Mention has already been made of control or modification of symptoms where complete relief is impossible, very difficult, or impractical. Hypnosis may be employed to calm the very agitated patient, and on at least one occasion hospital admission has been avoided by this measure. Finally, it may be used in certain cases to control acting out, e.g. in a young woman who was being seen for frigidity. During the preliminary investigative phase, and before hypnosis had been suggested, she began to act out her repressed sexual urges at a party. At the session in which she reported this she was hypnotized and told that she would be able to control herself from now on, and would discuss her problem in therapy. This was repeated in subsequent sessions as long as there was danger of acting out, and no further episodes occurred.

Conclusion

Hypnosis has been greatly developed in the last ten to fifteen years as a valuable therapeutic tool in psychiatry. The current cycle of interest has produced advances that should establish its place in this field, provided it is used rationally and with intelligent preparation on the part of the therapist. Most of those who report failures may lack knowledge and experience, and would be comparable to

a general practitioner reporting the failure of the fenestration operation in a series of three he had performed after watching one (and then complaining that it took too long anyway). Most of the opposition comes from those who think of it as an authoritarian technique, with the therapist playing an omnipotent role and the patient one of a passive, dependent child. With the appropriate attitude and correct technique, the patient can and will play an active role in his therapy. Hypnosis thus properly used has a wide range of applications and can in a majority of cases shorten therapy as much as one half to one quarter the usual time.

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Résumé

L'hypnose est un instrument fort utile qui permet d'abrégier le processus de la psychothérapie. Beaucoup de progrès et toute une gamme d'applications ont découlé d'un renouveau d'intérêt envers cette technique au milieu du présent siècle. La profession médicale, cependant, nourrit encore certaines idées fausses à ce propos: l'induction hypnotique prend trop de temps, il faut, pour un emploi efficace, réaliser la transe somnambuliste, le malade hypnotisé est un automate passif, la disparition des symptômes par suggestion directe n'est que transitoire et mène à une rechute ou à des symptômes de substitution, et l'hypnose suscite chez le malade un excès de dépendance envers le thérapeute. Grâce à une attitude et à

des techniques appropriées, le malade peut participer activement à son traitement. L'état hypnotique offre certains avantages qui facilitent le processus de la psychothérapie, y compris un accès plus direct du malade dans son inconscient.

L'hypnose sert surtout dans le traitement des psychonévroses. La façon d'aborder le malade et certaines techniques sont exposées dans l'article, de même que les principes qui serviront de guide dans l'administration de l'hypnothérapie. On cite des cas pour illustrer cinq différents emplois de l'hypnose en hypnothérapie: 1) stimuler le mouvement; 2) corriger des traits indésirables de la person-

nalité, amener le malade à se débarrasser d'habitudes sans mobile et renforcer les habitudes plus appropriées; 3) dissiper certains symptômes individuels et spécifiques par le moyen de la suggestion seulement; 4) distinguer les états fonctionnels des états organiques et déterminer la nature et l'importance de l'influence fonctionnelle surjacente; 5) un groupe divers, par exemple le maître de la simulation.

L'hypnose utilisée d'une manière rationnelle et avec une préparation intelligente de la part du thérapeute peut, dans la majorité des cas, abréger le traitement de un quart jusqu'à la moitié même du temps requis.



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ADRENAL CORTICAL STRESS EFFECTS IN SENILITY. II. THE RESPONSE TO HEAT STIMULATION PRODUCED BY THE HARDY-WOLFF-GOODSELL DOLORIMETER

B. GRAD, Ph.D. AND V. A. KRAL, M.D.¹

The reasons for undertaking this series of studies has been described previously (1). In that study it was found that the patterns of response to blindfolding as measured by the circulating eosinophils and the salivary Na/K ratio was different in patients suffering from senile psychosis from that of elderly schizophrenics, and different in both these groups from that of non-psychotic old people. The present study was undertaken in the same groups of patients (but in different subjects) to observe the pattern of response to a pricking pain produced by radiant heat.

Material and Methods

Five groups of subjects each comprising 5 men and 5 women, formed the case material. One group consisted of 10 young subjects without signs of mental disorder, another group comprised 10 elderly persons also without signs of mental disorder, the third group 10 young people with functional psychoses, most of them schizophrenics, the fourth group 10 old patients with schizophrenia, and the fifth group 10 patients with senile psychosis. The ages of the various groups are shown in Table 1.

To produce the pricking pain, use was made of the Hardy-Wolff-Goodell dolorimeter, which provides a convenient means of applying a measurable and controlled radiant heat stimulus (2). The wide range of available stimulus settings makes possible the controlled application of sensations both below and above the threshold and for constant or variable time intervals. In the present study the stimulus was applied to the skin of the forehead, an area of about 1 sq. in. being blackened to avoid transmittance and reflectance by the skin. The subject was then informed how the apparatus was to

be applied to the forehead, and allowed to feel on the palm of his hand the sensation of heat produced at a low dial setting. He was then given 12 stimuli in the following order, 425, 230, 290, 340, 230, 290, 340, 230, 290, 340, 425, and 425 millicalories per cm.² per sec., with 1 minute interval between successive stimulations. All stimuli were of 3 seconds duration except the last one which was 1 second long. Most of the subjects stated to have experienced a pricking pain with 425 mc./sec./cm.². This was evident also from the fact that they withdrew their foreheads from the apparatus in response to this stimulus.

Samples of venous blood and saliva were taken immediately prior to the test, immediately after it and 3½ hours later. The blood was collected before the saliva which was of the unstimulated mixed variety normally found in the mouth before meals. The subjects were watched to see that they neither ate, drank, smoked, nor napped for an hour prior to the beginning of the test, as these factors were known to influence the salivary Na/K ratio (3). The first samples were taken an hour before lunch. Then the subjects were given the 12 heat stimuli after which the second sample was taken. Lunch was then taken as usual. The last sample was collected in the mid-afternoon. Because both the circulating eosinophils and the salivary Na/K have a diurnal variation, that time of the day in which the diurnal variation is known to be at a minimum was selected for the test.

The eosinophils of the blood were stained with phloxine in a propylene glycol solution, and counted in a Fuchs-Rosenthal haemocytometer. Sodium and potassium concentrations were deter-

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TABLE 1
Age Distribution of Subjects used in Experiment

GROUP	MEN	WOMEN	BOTH
Young Normals	28 ¹ ± 3 ²	30 ± 2	29 ± 2
Old Normals	84 ± 1	77 ± 1	81 ± 1
Young Psychotics	28 ± 2	26 ± 3	27 ± 2
Senile Dementia	77 ± 3	80 ± 1	79 ± 2
Old Schizophrenics	72 ± 4	73 ± 1	73 ± 2

¹Mean²Standard Error

There were 5 men and 5 women per group.

mined by a flame photometric technique described earlier (3).

The significant findings are presented in 2 ways: first, in the form of the original, mathematically untransformed data; second, as relative data obtained by expressing each result of each subject as a percentage of the mean of the 3 results obtained from that person. The data were analyzed by analysis of variance including the analysis of the interaction of the various factors involved.

Results

Age of Subjects (Table 1): There were no significant differences between the 2 groups of young subjects ($0.90 > P > 0.80$), or between the 3 groups of old subjects ($P > 0.40$), but all other age differences between the groups were significant ($0.01 > P > 0.001$). There was no significant age difference between the sexes, nor was there a significant group x sex interaction ($P > 0.30$).

Circulating Eosinophils: Absolute Data (Table 2). Young and old patients with functional psychoses had significantly higher pretest values than the remaining 3 groups ($P < 0.01$), and the elderly schizophrenic patients had still higher values than those of the young patients with functional psychoses ($P < 0.001$). There were no significant differences between the remaining 3 groups ($P > 0.05$). There was a significant group x sex interaction ($P < 0.001$), which was due to the fact that in the young functionals the men had the significantly lower values ($0.01 > P > 0.001$), while in the elderly schizophrenics they had the significantly higher ones ($P < 0.001$). There were no significant differences in the remaining 3 groups ($P > 0.10$).

There was no significant change following stimulation with the dolorimeter ($P > 0.20$) when all 5 groups were taken together, nor were there any significant differences in the way one group re-

TABLE 2
The Effect of a Heat-induced Pricking Pain on the Absolute Circulating Eosinophil Count (Number/cu. mm.) of Young and Old Normal and Psychotic Subjects

GROUPS	MEN			WOMEN			MEN AND WOMEN		
	A	B	C	A	B	C	A	B	C
Young Normal	153 ¹ ± 52 ²	172 ± 75	131 ± 53	103 ± 37	72 ± 21	84 ± 26	128 ± 31	122 ± 40	108 ± 29
Old Normal	128 ± 44	116 ± 45	106 ± 33	97 ± 46	91 ± 53	81 ± 36	113 ± 30	103 ± 33	95 ± 23
Young Psychotics	109 ± 33	109 ± 33	69 ± 7	200 ± 81	231 ± 120	203 ± 95	155 ± 44	171 ± 62	136 ± 50
Old Schizophrenics	334 ± 73	363 ± 38	450 ± 111	113 ± 51	81 ± 37	78 ± 27	223 ± 56	221 ± 53	264 ± 82
Senile Dementia	106 ± 33	138 ± 49	94 ± 27	122 ± 37	53 ± 15	72 ± 29	114 ± 7	96 ± 9	83 ± 6

A — Before Stimulation.

B — Immediately After Stimulation.

C — 3-4 hours After Stimulation.

¹Mean²Standard Error

There were 5 men and 5 women per group.

sponded to stimulation as compared with that of any other group ($P > 0.20$).

Relative Data (Table 3): In response to stimulation with the dolorimeter, there was a significant decline immediately after the stimuli were applied ($0.01 > P > 0.001$), the decline persisting 3 to 4 hours later ($0.02 > P > 0.01$). All groups tended to show this pattern of response to a greater or lesser extent: the pattern of response did not vary significantly from one group to the other ($P > 0.20$).

Salivary Sodium/Potassium: Absolute Data (Table 4): The senile patients and the elderly schizophrenic subjects had significantly higher pretest values than those of the remaining 3 groups ($P < 0.001$). The senile subjects also had significantly higher values than did the elderly schizophrenics ($0.01 > P > 0.001$).

There was no significant difference in the salivary Na/K ratio due to sex ($P > 0.20$) when the data of the 5 groups were considered together. However, there was a significant group \times sex interaction, and this was due to the significantly higher values for females than males in the senile patient group ($P < 0.001$).

Following stimulation with the Hardy-Wolff-Goodell dolorimeter, all the groups taken as a whole showed a significant fall of the Na/K ratio ($0.01 > P > 0.001$), which was maintained 3 to 4 hours later ($0.05 > P > 0.02$). There was however, a significant difference in the patterns of response of the various groups ($P < 0.001$). Following stimulation, the elderly schizophrenics showed an immediate decline of the salivary Na/K ratio which, persisted for the next 3 to 4 hours, the decline being significant at the 5% level. In the senile patients the fall was significant immediately after the stress ($0.05 > P > 0.02$) but only borderline 3 to 4 hours afterwards. There were no significant changes as a result of the pain stimulation in the remaining 3 groups.

TABLE 3
The Effect of a Heat-induced Pricking Pain on the Relative Circulating Eosinophil Count (Percentage) of Young and Old Normal and Psychotic Subjects

GROUPS	MEN			WOMEN			MEN AND WOMEN		
	A	B	C	A	B	C	A	B	C
Young Normals	99.4 ¹ \pm 4.7 ²	105.0 \pm 6.2	94.6 \pm 8.9	110.0 \pm 11.0	88.8 \pm 8.4	101.2 \pm 6.9	105.2 \pm 6.0	96.9 \pm 5.6	97.9 \pm 5.4
Old Normals	113.0 \pm 7.6	95.6 \pm 7.7	90.2 \pm 11.1	116.2 \pm 8.6	81.8 \pm 14.3	99.8 \pm 9.9	114.6 \pm 5.4	88.7 \pm 8.0	95.0 \pm 7.2
Young Psychotic	106.0 \pm 12.8	106.6 \pm 11.3	86.6 \pm 19.0	102.2 \pm 5.8	94.2 \pm 12.8	110.0 \pm 17.2	104.1 \pm 6.6	100.4 \pm 8.3	98.3 \pm 12.7
Old Schizophrenic	87.6 \pm 8.6	100.6 \pm 9.1	112.4 \pm 9.8	123.4 \pm 12.8	82.8 \pm 10.5	90.6 \pm 9.3	105.5 \pm 9.4	91.7 \pm 7.2	101.5 \pm 7.3
Senile Dementia	96.2 \pm 8.4	106.6 \pm 15.7	93.0 \pm 11.1	138.8 \pm 17.0	81.2 \pm 21.0	76.8 \pm 12.3	117.5 \pm 11.4	93.9 \pm 13.1	84.9 \pm 8.3

¹Mean

²Standard Error

A — Before stimulation.
B — Immediately after stimulation.
C — 3-4 hours after stimulation.

There were 5 men and 5 women per group.

TABLE 4
The Effect of a Heat-induced Pricking Pain on the Absolute Salivary Na/K of Young and Old Normal and Psychotic Subjects

GROUPS	MEN			WOMEN			MEN AND WOMEN		
	A	B	C	A	B	C	A	B	C
Young Normals	0.30 ¹ ± 0.06 ²	0.25 ± 0.04	0.25 ± 0.04	0.22 ± 0.03	0.20 ± 0.10	0.23 ± 0.04	0.26 ± 0.03	0.22 ± 0.02	0.27 ± 0.03
Old Normals	0.31 ± 0.04	0.34 ± 0.06	0.33 ± 0.07	0.27 ± 0.04	0.22 ± 0.10	0.19 ± 0.04	0.29 ± 0.03	0.28 ± 0.03	0.26 ± 0.05
Young Psychotics	0.22 ± 0.04	0.22 ± 0.05	0.27 ± 0.07	0.31 ± 0.06	0.26 ± 0.06	0.32 ± 0.06	0.26 ± 0.03	0.24 ± 0.03	0.29 ± 0.05
Old Schizophrenics	0.45 ± 0.18	0.36 ± 0.05	0.41 ± 0.11	0.44 ± 0.05	0.35 ± 0.23	0.28 ± 0.08	0.50 ± 0.06	0.35 ± 0.05	0.35 ± 0.06
Senile Dementia	0.43 ± 0.10	0.24 ± 0.05	0.27 ± 0.05	0.60 ± 0.23	0.57 ± 0.19	0.60 ± 0.20	0.51 ± 0.06	0.41 ± 0.11	0.43 ± 0.11

A — Before stimulation.

B — Immediately after stimulation.

C — 3-4 hours after stimulation.

¹Mean

²Standard error
There were 5 men and 5 women per group.

TABLE 5
The Effect of a Heat-induced Pricking Pain on the Relative Salivary Na/K Ratio (Percentage) of Young and Old Psychotic Subjects

GROUPS	MEN			WOMEN			MEN AND WOMEN		
	A	B	C	A	B	C	A	B	C
Young Normals	108.0 ¹ ± 4.6 ²	96.2 ± 6.4	96.2 ± 3.2	103.8 ± 8.8	92.2 ± 4.1	104.8 ± 11.0	105.9 ± 4.7	94.2 ± 3.7	100.5 ± 5.6
Old Normals	99.8 ± 17.4	103.8 ± 15.0	97.0 ± 14.9	118.8 ± 5.6	100.4 ± 11.7	83.0 ± 14.9	109.3 ± 9.2	102.1 ± 9.0	90.0 ± 10.2
Young Psychotics	94.2 ± 5.8	94.4 ± 8.3	111.0 ± 7.0	105.8 ± 2.2	86.8 ± 10.7	109.8 ± 11.3	100.0 ± 3.5	100.0 ± 5.4	110.4 ± 6.3
Old Schizophrenics	107.6 ± 7.6	93.2 ± 8.7	99.4 ± 9.5	124.4 ± 8.5	93.8 ± 6.6	76.8 ± 8.3	116.0 ± 6.0	93.5 ± 5.2	88.1 ± 7.0
Senile Dementia	131.0 ± 14.5	82.8 ± 10.4	88.8 ± 6.5	93.4 ± 11.7	100.8 ± 10.7	105.4 ± 12.8	112.2 ± 10.8	91.8 ± 7.7	91.1 ± 7.3

A — Before stimulation.

B — Immediately after stimulation.

C — 3-4 hours after stimulation.

¹Mean

²Standard error
There were 5 men and 5 women per group.

Relative Values (Table 5): Taking all 5 groups together, there was a significant decline immediately following stimulation ($0.01 > P > 0.001$). This was maintained 3 to 4 hours later ($0.02 > P > 0.01$). However, the pattern of response did not appear to vary significantly from one group to the other ($P > 0.20$).

Discussion

In the earlier study (1) it was found that blindfolding for one half hour produced in most of the subjects changes in the circulating eosinophils and the salivary Na/K ratio which indicated that the procedure was actually stressful to them. This assumption was corroborated by the behaviour of the subjects during the experiment and by the results of psychological tests taken before and after blindfolding (4). As regards the different diagnostic categories investigated in that study it was found that normal young subjects responded to blindfolding with an immediate and significant decline of the circulating eosinophils and a significant increase of the salivary Na/K ratio. Both these changes reverted to normal 3-4 hours after the test. Senile dementia patients also showed a significant eosinopenia, not immediately after blindfolding but 3-4 hours later. There was no change of the salivary Na/K ratio in this group. Elderly schizophrenics showed a significant decline of the salivary Na/K ratio immediately following blindfolding which persisted 3-4 hours later. This group showed no significant change in the eosinophils. There were no significant changes in the two other groups: normal old persons and young adults suffering from functional psychoses.

As the stress produced by blindfolding was to all appearances a psychological stress, the present study was undertaken to see what the response would be to a "physical" stress, a pricking pain produced by a known amount of heat delivered to a definite area for a very short and known period of time. Almost all the

subjects responded with some slight wincing and withdrawal from contact with the dolorimeter after the first stimulus with 425 mc./sec./cm.². This taken together with the fact that the relative eosinophil count, and the absolute and relative data of the salivary Na/K declined for at least 3 to 4 hours following stimulation, would indicate that the subjects had undergone some stress.

The evidence for the existence of an inverse relationship between the circulating eosinophils and the salivary Na/K on the one hand, and the level of sugar-activity and salt-activity of adrenal cortical function on the other has already been given (1). In view of this, the fact that both the eosinophils and the salivary Na/K declined following stimulation with the dolorimeter implies an increased output of salt- and sugar-active corticoids. Moreover, in the case of the salivary Na/K, there was a difference in the pattern of response to pricking pain between the 5 groups. Both the elderly schizophrenics and the senile patients showed a significant decline in the salivary Na/K following stimulation, while the remaining 3 groups did not. This suggests an increased output of salt-active hormones in response to "pricking pain" stimulation in both elderly schizophrenics and the senile patients.

This is the more interesting as only the group of elderly schizophrenics but not the senile patients had reacted to blindfolding with a decline of the salivary Na/K ratio (1), whereas to the stimulus of pricking pain both groups responded with the same change. It is perhaps not unreasonable to assume that pricking pain acts as a more potent mobilizer of the salt-active corticoids than blindfolding in patients with senile dementia. In this connection it should be noted that the recollection of painful stimuli might be the only partial memory left in a patient suffering from a severe senile dementia (5).

The present study also confirmed the previous finding that the salivary Na/K

was significantly higher in old schizophrenics and in senile dementia patients than in young and old normals, and higher than in young persons with functional psychoses. As pointed out earlier (1), it would appear that the combination of both the advanced age of the subjects and their psychosis was somehow involved in producing an elevated salivary Na/K ratio. Also, the elevated Na/K ratio is similar to that observed in patients with Addison's disease. This would appear to suggest that the elderly schizophrenics and senile dementia patients have some deficiency of adrenal cortical function under resting conditions. However, the salt-active function in elderly mental patients appears to be capable of responding to the stress of a pricking pain, and indeed this response was greater than that of normal old or mentally ill young persons.

The elevated salivary Na/K in the elderly subjects with mental disease is due to an elevated salivary Na concentration (Table 6) without a corresponding increase in the salivary K (Table 7). This was also observed in the data of the earlier study but was not reported at that time. The normal old subjects also had an elevated salivary Na concentration, which was significantly higher than that of both groups of young subjects ($P < 0.02$), and which was as high as that of the elderly schizophrenics ($0.70 > P > 0.60$), but significantly lower than that of the seniles ($0.05 > P > 0.02$). But the salivary Na/K remained at normal levels in the normal old persons because of the very high salivary K concentrations found in this group (Table 7). In fact, the normal old subjects had the highest salivary K concentrations, significantly higher than that of all the other groups ($P < 0.05$). In short, during aging in normal persons both the salivary Na and K concentrations increase to a relatively similar extent with the result that there is no change in the

salivary Na/K ratio. However, in elderly persons with mental disease the salivary Na concentration increases without a corresponding increase in the salivary K concentration, a condition which could be the consequence of a deficient salt-activity of the adrenal cortex. This suggests that there may be in elderly mental subjects an excessive retention of K in the body as a whole, and in this connection it is of some interest to note that the addition of K ions to brain slices *in vitro* stimulates this tissue's respiration whereas K does not have this effect on other tissues, such as kidney, testis, or tumor (6,7). Dickens and Greville suggested that the action of K on brain metabolism resulted from an alteration by it of the colloidal state of the tissue protoplasm of aged persons (7). Whether this has any significance for the mental symptoms of aged persons requires further investigation.

The finding that the circulating eosinophil level was higher in young persons with functional psychoses than in young or old normal persons or in persons with senile dementia is in agreement with our earlier findings (1). However, in the present study the highest values for circulating eosinophils were obtained in the elderly schizophrenic patients whereas in the earlier study the values obtained for this group were not significantly above those of the young subjects with functional psychoses.

Summary

Five groups of subjects (normal young persons, normal old persons, young persons with functional psychosis, persons with senile dementia and old schizophrenics), each comprising 5 men and 5 women were exposed to 12 stimuli, ranging from 230 to 425 mc./sec./cm.² from a Hardy-Wolff-Goodell dolorimeter. Samples of blood and saliva were taken immediately before, immediately after and $3\frac{1}{2}$ hours after the stimuli were applied. The sodium-potassium ratio was

TABLE 6
The Effect of a Heat-induced Pricking Pain on the Absolute Salivary Na (mEq/L) of Young and Old Normal and Psychotic Subjects

GROUPS	MEN			WOMEN			MEN AND WOMEN		
	A	B	C	A	B	C	A	B	C
Young Normals	7.8 ¹ ± 2.3 ²	6.3 ± 1.3	7.0 ± 1.8	4.5 ± 0.3	4.0 ± 0.5	4.8 ± 0.8	6.3 ± 1.0	5.0 ± 0.8	5.8 ± 0.8
Old Normals	10.0 ± 1.3	10.5 ± 1.3	8.3 ± 1.0	12.0 ± 1.0	11.8 ± 1.3	6.3 ± 0.8	11.0 ± 1.5	11.3 ± 1.8	7.3 ± 0.8
Young Psychotics	5.3 ± 0.8	5.3 ± 1.0	6.0 ± 1.0	8.0 ± 2.5	6.3 ± 1.8	7.0 ± 2.0	6.5 ± 1.3	5.8 ± 1.0	6.5 ± 1.3
Old Schizophrenics	12.0 ± 4.0	10.3 ± 2.0	12.8 ± 4.5	11.3 ± 1.5	9.8 ± 2.8	7.5 ± 1.0	11.8 ± 2.0	10.0 ± 1.5	10.3 ± 2.3
Senile Dementia	13.8 ± 3.3	7.5 ± 0.5	8.5 ± 0.5	17.5 ± 6.8	15.0 ± 4.3	16.3 ± 4.5	15.8 ± 3.5	11.3 ± 2.3	12.3 ± 2.5

A — Before stimulation.

B — Immediately after stimulation.

C — 3-4 hours after stimulation.

¹Mean

²Standard error

There were 5 men and 5 women per group.

TABLE 7
The Effect of a Heat-induced Pricking Pain on the Absolute Salivary K (mEq/L) of Young and Old Normal and Psychotic Subjects

GROUPS	MEN			WOMEN			MEN AND WOMEN		
	A	B	C	A	B	C	A	B	C
Young Normals	27.0 ¹ ± 6.0 ²	26.0 ± 5.0	27.3 ± 5.3	20.3 ± 1.3	20.3 ± 1.0	21.0 ± 1.5	23.8 ± 3.3	23.3 ± 2.5	24.3 ± 2.8
Old Normals	32.0 ± 1.5	33.3 ± 4.5	27.3 ± 7.0	46.5 ± 13.3	51.8 ± 13.0	41.8 ± 12.8	39.0 ± 6.8	42.5 ± 7.3	34.3 ± 6.8
Young Psychotics	24.3 ± 1.3	23.3 ± 1.5	23.5 ± 1.8	23.5 ± 3.3	23.8 ± 2.3	22.3 ± 2.3	24.0 ± 1.8	23.5 ± 1.3	22.8 ± 1.3
Old Schizophrenics	25.0 ± 1.8	28.0 ± 3.5	28.8 ± 3.8	25.5 ± 1.5	26.8 ± 1.8	26.3 ± 1.5	26.0 ± 1.0	27.3 ± 2.0	27.5 ± 2.0
Senile Dementia	36.8 ± 6.5	34.8 ± 6.3	36.5 ± 6.0	31.0 ± 4.5	28.3 ± 4.3	28.5 ± 4.3	34.0 ± 4.0	31.5 ± 4.5	32.5 ± 3.8

A — Before stimulation.

B — Immediately after stimulation.

C — 3-4 hours after stimulation.

¹Mean

²Standard error

There were 5 men and 5 women per group.

determined in the saliva and the number of eosinophils was counted in the blood.

Prior to stimulation, elderly schizophrenic patients had significantly higher eosinophil counts than all the other subjects, while young persons with functional psychoses had significantly higher counts than that of all subjects except the elderly schizophrenic patients. In response to stimulation with the dolorimeter, there was a significant decline immediately after the stimuli were applied, the decline persisting 3 to 4 hours later. However, the pattern of response did not appear to vary significantly from one group to the other.

In the case of the salivary Na/K, the elderly schizophrenic and the senile dementia patients had significantly higher values than the other groups prior to stimulation. This rise in the elderly mental patients was due mainly to increases in the salivary Na concentration, the salivary K concentration showing less marked increases. The salivary Na concentration of normal old subjects also increased when compared with that of the young subjects but there was a corresponding rise in the salivary K concentration leaving the Na/K ratio unchanged. Immediately following stimulation with the dolorimeter, the salivary Na/K declined significantly, and this decline was also observed 3 to 4 hours later. This pattern was observed when all groups were taken together, but was chiefly due to the responses of the 2 groups of old mental subjects, the remaining 3 groups showing no significant changes in this respect. In view of the inverse relationship between the change in the level of the salivary Na/K on the one hand and the change in the level of the salt-active hormones of the adrenal on the other, it is suggested that the elderly schizophrenic and senile dementia patient react to the stress of a pricking pain produced by the Hardy-Wolff-Goodell dolorimeter with an increased output of salt-active corticoids.

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Résumé

Cinq groupes de sujets (personnes jeunes normales, personnes âgées normales, personnes jeunes avec psychoses fonctionnelles, personnes avec démence sénile et schizophréniques âgés) chacun comprenant 5 hommes et 5 femmes, furent exposés à 12 stimuli, variant de 230 à 425 mc./sec./cm.² d'un dolorimètre Hardy-Wolff-Goodell. Des prélèvements de sang et de salive furent pris immédiatement avant, immédiatement après et 3½ heures après que les stimuli furent appliqués. La proportion de sodium-

potassium dans la salive fut déterminée et le nombre d'éosinophiles dans le sang fut compté.

Avant la stimulation, les patients schizophréniques âgés avaient des numérations d'éosinophiles sensiblement plus élevées que tous les autres sujets, tandis que les personnes jeunes avec psychoses fonctionnelles avaient des numérations sensiblement plus élevées que tous les autres sujets excepté les schizophréniques âgés. En réponse à la stimulation par le dolorimètre, il y eut une diminution marquée immédiatement après que les stimuli furent appliqués, laquelle dura de 3 à 4 heures. Cependant le mode des effets ne sembla pas varier de façon marquée de l'un à l'autre.

Regardant la proportion de Na/K dans la salive, les schizophréniques âgés et les patients atteints de démence sénile eurent des valeurs sensiblement plus élevées que les autres groupes avant la stimulation. Cette élévation chez les patients mentaux âgés était due principalement à une élévation dans la concentration salivaire en sodium, l'élévation de la concentration en potassium étant bien moins pronon-

cée. Les concentrations salivaires en sodium des sujets âgés normaux furent élevées aussi en comparaison avec ceux des sujets jeunes, mais il y eut aussi une élévation correspondante de la concentration salivaire en potassium, alors que la proportion Na/K demeurait constante. Immédiatement après la stimulation avec le dolorimètre, la proportion salivaire Na/K décrût de façon marquée, et cette diminution fut observée 3 à 4 heures après. Ces effets furent observés quand tous les groupes furent considérés ensemble, mais dépendirent principalement des résultats des 2 groupes de sujets mentaux âgés, tandis que les 3 autres groupes ne montrèrent aucun changement sensible à ce sujet. Considérant la relation inverse entre les changements dans le niveau de proportion salivaire Na/K d'un côté, et le changement dans le niveau des hormones sel-activées des surrénales de l'autre, il est suggéré que les schizophréniques âgés et les déments séniles réagissent à l'effet de douleur piquante produite par le dolorimètre Hardy-Wolff-Goodell, avec une augmentation de la production de corticoïdes sel-activés.

Canadian Psychiatric Association

Annual General Meeting

The annual general meeting of the C.P.A. for 1961 will be held in conjunction with the **THIRD WORLD CONGRESS of PSYCHIATRY** in Montreal, 4th-10th June 1961.

The business meeting will be held June 4th, 1961 (and NOT June 11th as listed in previous issue).

ACCOMMODATION is being arranged by the **THIRD WORLD CONGRESS**.

THOUGHT DISORDER AND RETARDATION IN SCHIZOPHRENIA*

R. W. PAYNE, Ph.D.¹

The findings I am going to describe today represent the most recent results obtained from a series of investigations which I have been performing over the past eight years. Before describing these results, I should very briefly like to fill in the background by summarizing the main aims and results of the earlier work. I first became interested in the study of schizophrenic thought disorder ten years ago. It struck me as a fruitful field for a psychologist to be concerned with, because psychologists have been measuring aspects of normal cognition for many years, and might be well able to use this experience to develop sensitive and objective measures of special cognitive abnormalities.

My first investigation was concerned with testing Kretschmer's reformulation of Bleuler's original explanation of schizophrenic thought disorder. Bleuler believed that essentially, schizophrenic thought disorder was the result of a fragmentation, or dissociation of mental processes; a weakening of the bonds of association. Kretschmer elaborated this idea. He used the term *Spaltungsfähigkeit* or dissociation to describe this postulated abnormality, and believed that it was one of the several correlates of his fundamental constitutional typology *schizothymia-cyclothymia*, and hence a function of body build among other things. He developed a large number of objective tests of dissociation. In my first experiment, I investigated all the tests which Kretschmer had developed, and a number of new ones. I discovered that, unfortunately for Kretschmer's theory, these tests measured nothing in common. Furthermore, after conducting an extensive review of the literature in the field, which is mainly German, I concluded

that there was no evidence that these tests of dissociation could differentiate schizophrenic patients from any other types of patients, nor were the test scores related in any way to body build. Thus I concluded that the experimental evidence does not support Kretschmer's—or for that matter Bleuler's original theory about the nature of schizophrenic thought disorder.

In a number of subsequent investigations, I investigated three other types of cognitive dysfunction, which different authorities have regarded as being the basis of schizophrenic thought disorder.

The first of these is what has been called "concreteness". Since Goldstein's famous monograph on this subject appeared, many authorities have claimed that schizophrenics are abnormally concrete in their thinking, and that this is the basis of their thought disorder. Indeed the assessment of concrete thinking by asking the patient to interpret proverbs is a standard part of the examination for schizophrenic thought disorder used by many psychiatrists. In studies using the proverbs test, Goldstein and Scheerer's sorting tests, a number of other standard techniques and a number of new techniques, I was unable to find any evidence for the hypothesis that schizophrenics are abnormally concrete. They did not differ from normal people, neurotics, or depressed patients on a large number of objective measures of concreteness, although there was evidence that for all people, regardless of the diagnosis, those who are of low intelligence on standard I.Q. tests tend to be concrete. Indeed I question whether concreteness can be differentiated from what is usually called general intelligence.

The second cognitive abnormality investigated was general retardation, or psycho-motor slowness. Harriet Babcock

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in the early thirties argued that the sole cause of schizophrenic thought disorder was an extreme degree of intellectual slowness. This retardation was so gross that patients suffering from it were unable to think fast enough to follow a normal conversation. Thus if forced to communicate, they had to answer at random, hence appearing thought disordered. Also this handicap to a large extent explained their social withdrawal. Babcock herself produced considerable evidence that schizophrenics are abnormally slow. In following up this work, I was concerned to measure the speed of a large number of different psychological functions, speed of solving abstract problems at various levels of difficulty, simple psycho-motor speed of for example drawing, reaction time, perceptual speed, speed at performing manual and finger dexterity tasks and so on. Several of the results obtained were slightly surprising. Although in a normal population, these different speed scores tend to be to a large degree independent, they correlate very highly in a psychiatric population. Neurotic patients are relatively normal with respect to their speed of functioning, although a number of relatively complex relationships were discovered within this group which I will not attempt to describe. On the other hand both depressed patients and schizophrenics are on average, extremely slow. Both groups are equally slow at all types of tasks. I had originally believed that schizophrenics would be much slower at intellectual tasks than at simple motor tasks, because I thought that their over-inclusive thinking, which I will describe in a moment, would influence their intellectual speed but not their motor speed. However this was not the case in my largest and best controlled study. On average, schizophrenics were abnormally slow at all types of tasks, the most simple and the most difficult.

The third cognitive abnormality investigated was "overinclusive thinking". Norman Cameron has described this in

detail. He means by overinclusive thinking, the inability to preserve the normal boundaries of concepts. Concepts become more extensive, more vague, and tend to overlap, so that logic becomes vague, and contradictory, and thinking abnormally abstract, and influenced by what for normal people are irrelevant ideas. In investigating this theory, I developed a number of objective tests, used one or two which had previously been developed, and attempted to formulate an explanation of overinclusive thinking in terms of both learning theory and information theory. To be brief, the hypotheses tended to be confirmed. As predicted, on average, schizophrenics were abnormally overinclusive on all the tests used. Furthermore, this was specific to patients labelled schizophrenic. Although depressives were slow, they were not overinclusive. Let me give one very brief example. In a sorting test which was especially devised for the purpose, it was predicted that although there were only 10 different logical ways of sorting the objectives (small circles, squares and triangles—e.g. shape, hue, weight, thickness, etc.), the schizophrenics, by virtue of their overinclusion, would perceive many more aspects of the test material as relevant to the task. Thus, they would utilize such things as the shadows cast by the objects, unintentional scratches on the objects, their personal associations to the objects and so on. It was expected that they would see all the usual ways of sorting the objects, but would see many other ways based on these irrelevant aspects in addition. These predictions were verified. Schizophrenics in several studies could think of twice as many ways of sorting the objects as any other group, and, as expected, were not "concrete" as they could think of as many of the usual ways as normal people.

In the most recently analysed study, a large number of objective tests of psycho-motor retardation, overinclusion and concreteness were given to groups of 20 schizophrenics, 20 depressives, 20 neu-

rotic in-patients and 20 normal people at the Bethlem Royal and Maudsley Hospitals, London. These groups were carefully matched for pre-illness intellectual level as judged by a vocabulary test, years of formal education, socio-economic status as rated, age, length of illness, length of hospitalization, and type of occupation.

The tests for the whole group of subjects were intercorrelated, and a complex multivariate analysis of the data was performed. It was demonstrated that in addition to measuring general intelligence, a factor which did not differentiate the groups because of the matching, the battery of tests as predicted, measured two virtually independent factors which significantly differentiated the groups. The first abnormality was labelled "general retardation". Tests of perceptual slowness, slowness of simple motor movement and tests of speed of problem solving of all types, measured this factor equally well. The implication of this finding is that patients who are abnormally slow, tend to be retarded in all aspects of their behaviour. It was found that on average, the depressed patients and the schizophrenics were equally retarded as measured by this battery of tests. Neurotics were no more retarded on average than normals.

The second factor was labelled "overinclusion" and was measured by the tests predicted. As expected on average, only the schizophrenic group was abnormally overinclusive. The depressives and the neurotics were perfectly normal with respect to this type of thought disorder.

With respect to these two abnormalities, all the groups were relatively homogeneous, except for the schizophrenics. The normals and the neurotics were neither retarded nor overinclusive. None of the depressives were abnormally overinclusive, but all tended to be retarded. The schizophrenics on the other hand were heterogeneous on both variables. About half the schizophrenics were clearly abnormally overinclusive. On the

other hand half were within the normal range in this respect. About half the schizophrenics were extremely retarded. However, about half were normal with respect to their psycho-motor speed. Furthermore it was demonstrated that within the schizophrenic group, there was a very marked tendency for those who were abnormally overinclusive *not* to be abnormally slow, and those who were abnormally slow *not* to be abnormally overinclusive. This was done by computing factor scores for each subject on the factors of "retardation" and "overinclusion". None of the normal subjects had a retardation factor score in excess of 48, while 10 of the 20 schizophrenics were slower than this. These 10 abnormally retarded schizophrenics were compared with those who were not abnormally retarded. The abnormally retarded schizophrenics had an "overinclusion" factor score of only 27.2, nearly identical with the normal mean of 25.8. Thus the abnormally retarded schizophrenics were not abnormally overinclusive. On the other hand the schizophrenics whose retardation scores were all within the normal range had a mean overinclusion score of 39.14 as contrasted with the normal mean score of 25.8. Thus, in spite of the fact that all the schizophrenics tested were acute cases, none were judged either chronic or deteriorated, and all were regarded as typical of this condition, on the psychological tests, they formed two quite distinct groups: a group without overinclusive thought disorder, but with a more severe degree of general psycho-motor retardation than most depressed patients, and a quite different group with no retardation, but with an abnormal amount of overinclusive thought disorder.

It might be concluded that these objective psychological tests provide a new and objective basis for classifying the rather heterogeneous group of patients who are commonly lumped under the label of "schizophrenia". Future research might well investigate

whether or not these two fairly clear cut groups as classified by psychological tests, tend to have different sorts of symptoms, whether their illnesses follow quite different courses, and whether they respond differently to treatment.

Résumé

Trouble de l'idéation et arriération chez les schizophrènes

Au cours d'une période de huit années, on a effectué une série d'investigations expérimentales pour découvrir la nature du trouble de l'idéation chez les schizophrènes, au moyen de tests psychologiques objectifs.

Lors de la première étude, on a éprouvé l'hypothèse de Blueier, formulée à nouveau par Kretschmer et voulant que le trouble de l'idéation chez les schizophrènes soit le résultat d'une fragmentation généralisée ou d'une dissociation des processus mentaux. Au moyen des tests de Kretschmer et de nouveaux tests mis au point particulièrement à cet effet, on a constaté que les mesures de dissociation (*Spaltungsfähigkeit*) n'avaient rien en commun. Par conséquent, cette hypothèse manquait d'appui.

La seconde hypothèse examinée voulait que les schizophrènes soient "concrets" d'une façon anormale, c'est-à-dire, qu'ils sont incapables d'un raisonnement inductif dans l'abstrait. Deux études distinctes ont laissé supposer qu'aucun groupe diagnostique fonctionnel en psychiatrie n'est plus "concret" que normal, bien que dans les deux groupes, normal et anormal, des gens de faible intelligence ont des idées concrètes mesurées par les tests. Les résultats ont laissé penser qu'il ne serait peut-être pas possible de dif-

férencier les tests de "caractère concret" des tests d'intelligence générale.

Dans la troisième hypothèse examinée, on prétendait que la lenteur anormale était une caractéristique principale du trouble de l'idéation chez les schizophrènes. Les constatations antérieures de Harriet Babcock y trouvaient un appui. On constatait que les malades déprimés étaient lents sous tous rapports, y compris la rapidité du raisonnement et celle des fonctions motrices simples. En moyenne, les schizophrènes étaient lents de la même façon, mais au contraire des déprimés, ils étaient extrêmement hétérogènes sous ce rapport, quelques-uns étant normaux et d'autres vraiment très arriérés.

La quatrième hypothèse examinée était l'avancé de Norman Cameron qui croit que les schizophrènes "généralisent" d'une façon anormale dans leur raisonnement et leur formation de concepts. Au moyen de tests mis au point par d'autres chercheurs et de quelques tests nouveaux, il a été confirmé que seuls les schizophrènes "généralisent" d'une façon anormale tandis que les déprimés et les névrosés sont normaux sous ce rapport. Ici encore, les schizophrènes étaient tellement hétérogènes qu'on pouvait les répartir en deux sous-groupes distincts. Quelques-uns étaient arriérés d'une façon anormale, mais ne "généralisaient" pas tandis que d'autres "généralisaient" mais n'étaient pas lents d'une façon anormale. De plus amples recherches auront pour but de découvrir si ces deux groupes diffèrent également sous les rapports de la symptomatologie, du pronostic et de la réaction au traitement.



PARKINSONISM AND THE USE OF TRANQUILIZERS

C. W. GOWDEY Ph.D. AND K. S. FORSTER, M.D.¹

Many reports have recently appeared in the literature on the effects of tranquilizers, especially the phenothiazine derivatives (1,3,4,8,10,15,16,19,23,24,25, 28,29,31,34,39,40) and reserpine (15,31) on the extrapyramidal system. Although, earlier, chlorpromazine was used to treat Parkinson's disease (3,15,28,29), large doses may themselves lead to the syndrome (4,8,10,14,15,23,24,29,31). This was described in France as early as 1954 by De Boucaud and Fournial (4); they found that in 7 percent of mental patients treated with chlorpromazine a parkinsonian condition occurred which did not depend on the duration of treatment or the total dosage; decrease of dosage caused regression of the condition. Freyhan (15) observed parkinsonism in 10.7 percent of 541 patients treated with chlorpromazine and 16.9 percent of 112 treated with reserpine; in 4.8 percent the signs were so severe that the chlorpromazine treatment had to be terminated. He could not relate the diagnosis, age, duration of treatment, or total dose used with the onset of parkinsonism, but he did find that the incidence was about twice as high in women as in men. Kinross-Wright (24) stated that with doses of one gram or more per day of chlorpromazine the incidence is some 10 percent, and that it could develop with as little as 200 mg. a day after longer periods. In 90 patients treated with chlorpromazine Moyer (31) found extrapyramidal signs in 36; of these over one-half were receiving 450 mg. per day and one-quarter were getting 600 mg. per day. Freed (14) reported that children treated with chlorpromazine were less liable to develop parkinsonism than adults.

Some of the newer phenothiazine derivatives are even more liable than

chlorpromazine to produce extrapyramidal toxicity: Kinross-Wright (25) found these effects with prochlorperazine, trifluoperazine and perphenazine. Freyhan (16) described similar undesirable effects in 67 of 104 patients who received trifluoperazine—of these 53 percent had parkinsonism. In all, about one-third of the men treated, and two-thirds of the women, developed parkinsonism. Dyskinesia, however, was not more common in the women. Goldman (19) reported that 37 percent of patients treated with prochlorperazine, 23 percent receiving perphenazine and 17 percent on trifluoperazine showed parkinsonism; the lowest daily doses producing this syndrome were: 30 mg., 12 mg. and 75 mg. respectively.

Some psychiatrists have felt that because the parkinsonian condition usually regressed rapidly when therapy with the phenothiazines was stopped (and one claimed (1) even when it was continued), the condition should be considered a side effect of the treatment, not a complication (19). In other words, unesthetic, perhaps, but inevitable, and nothing to worry about. Others routinely administer antiparkinson agents along with the phenothiazines, although the commercial possibilities of combining them into a single tablet have not yet, we hope, been exploited. This regimen certainly supports the drug houses, but is vaguely reminiscent of the well-intentioned attempts to prevent vestibular dysfunction caused by streptomycin by adding dimenhydrinate—the dizziness was prevented while the patients slowly went deaf. It also evokes the recollection that in nineteenth-century prescriptions the "corrective" was often as important as the "base" and "adjuvant". Still others consider that in order to achieve significant changes in psychotic manifestations it is often necessary to push the dosage

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of phenothiazine compounds until parkinsonism develops (1,19,31). The extrapyramidal syndrome they consider an index of therapeutic efficiency analogous to the slowing of the pulse by digitalis in the management of cardiac failure (19). To us this seems an unwarranted assumption for a number of reasons. The slowing of the pulse by digitalis is directly related to the effect of the drug on the heart, its prime locus of action, but it is very unlikely that the development of parkinsonism is really an index of the therapeutic effect of the tranquilizers. Although it has been shown that the phenothiazines are widely distributed in the brain, the site of their main therapeutic activity is thought (21,28,34) to be the reticular formation and hypothalamus, whereas parkinsonism is associated primarily with the basal ganglia.

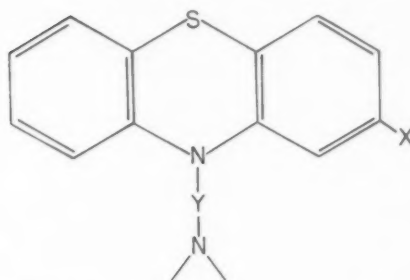
Investigation has shown that a great many phenothiazine derivatives have tranquilizing activity—which is defined as a sedative and hypnotic action without anaesthesia; the subjects, though calm and tranquil, are easily aroused by acoustic or tactile stimuli. Along with the tranquilizing activity, however, they may have other effects such as: antihistaminic (e.g.—promethazine, levomepromazine), anti-parkinson (diethazine, ethopropazine), anti-emetic (chlorpromazine, prochlorperazine), antispasmodic (aminopromazine), and antipruritic (trimepazine), and are generally used therapeutically for these effects rather than as tranquilizers. In addition they may have anti-adrenergic, chlonergic, local anaesthetic, and analgesic activity. But no one phenothiazine derivative has all of these actions in marked degree, although levomepromazine would appear to have the widest range of activity.

Recent studies cited by Kinross-Wright (26) have shown that although in some phenothiazine compounds tranquilizing activity is accompanied by marked extrapyramidal effects, in others the extrapyramidal effects are associated with potent anti-emetic activity; in still

others, it is possible to have tranquilizing activity without significant anti-emetic or extrapyramidal effects.

Earlier studies by Himwich, Rinaldi and Willis (21) on structure-activity relations indicated that phenothiazine derivatives with a 3-carbon straight chain were the most effective in inhibiting the reticular formation and blocking the EEG arousal pattern evoked by a nociceptive stimulus. Their results also showed, however, that although depression of the reticular formation had a beneficial effect on disturbed patients, additional actions were necessary to produce tranquilization. Later studies (16) showed that phenothiazines with a 3-carbon straight chain (see formulae) generally produced a relatively high incidence of drowsiness and lassitude (e.g. chlorpromazine); removal of the halogen in chlorpromazine, thus forming promazine, decreased the tranquilizing potency. When the halogen on position 2 is fluorine, as in trifluorpromazine, instead of chlorine, the tranquilizing activity is increased (26). Substitution of a piperazine ring for the amino group on the chain also increases the potency (26) (e.g. prochlorperazine). Trifluoperazine, possessing both the $-CF_3$ group in position 2 and the terminal piperazine ring, is a very potent tranquilizer; further studies have shown, however, that both the fluoro- and the piperazine substitution increase the incidence of extrapyramidal signs. Substitution of the amino group on the side chain by piperidine instead of piperazine, as in thiorodazine, does not increase the tranquilizing potency, but seems to prevent both anti-emetic and extrapyramidal toxicity (2, 26).

Recently Irwin (22) has questioned the validity of interpreting the results obtained by the screening of phenothiazine derivatives in animals as a measure of clinical usefulness. He compared the potency of eight phenothiazine tranquilizers in suppressing avoidance and locomotor behaviour in rats and found that



Generic Name	Trade Name	X	Y	Nitrogen
Chlorpromazine	Largactil	Cl	CH ₂ CH ₂ CH ₂	dimethylamine
Promazine	Sparine	H	CH ₂ CH ₂ CH ₂	"
Triflupromazine	Vesprin	- CF ₃	CH ₂ CH ₂ CH ₂	"
Prochlorperazine	Stemetil	Cl	CH ₂ CH ₂ CH ₂	methyl piperazine
Perphenazine	Trilafon	Cl	CH ₂ CH ₂ CH ₂	B hydroxyethyl piperazine
Trifluoperazine	Stelazine	- CF ₃	CH ₂ CH ₂ CH ₂	methyl piperazine
Thioridazine	Mellaril	- SCH ₃	CH ₂ CH ₂	methyl piperidine

equivalent avoidance-suppressing doses of all agents were equally effective in suppressing locomotor activity. Clinically, however, the most potent anti-psychotics, such as fluphenazine and trifluoperazine, and trifluoperazine, produce almost no locomotor depression and may actually stimulate. Irwin concluded that suppression of avoidance and locomotor behaviour in rats is unlikely to be relevant to the "anti-psychotic" action of the phenothiazine drugs.

It now appears that although the prime locus of action of the phenothiazine derivatives is on the extrapyramidal system, not all parts of this system are equally affected by the various compounds, and although extrapyramidal toxicity has often been associated with tranquilizing and anti-emetic activity, it need not be.

The increasing use of antiparkinson agents over the past several years in chemically-induced parkinsonism promoted us to compare several of the newer compounds in the laboratory. We began by injecting very large doses of chlorpromazine (25 mg. per kg. per day) intramuscularly into rats over a period of thirty days. The rats were lethargic, showed either catalepsy or ataxia, es-

pecially at first, did not eat normally, failed to gain weight, but showed no obvious tremors or other parkinsonian signs. Catalepsy in rats had also been noted by Tedeschi et al (42) after chlorpromazine (21 mg./kg.) and after trifluoperazine (2.6 mg./kg.). Courvoisier et al (9) administered chlorpromazine to dogs in doses of 20 mg. per kg. orally or subcutaneously daily for a month; no deaths occurred, but a mild hyperglycemia was observed. Boyd (7) administered chlorpromazine to rats in increasing doses (1 up to 200 mg. per kg.) 6 days a week for 40 weeks. On daily doses of 25 mg. per kg. the rats ceased growing and their fertility was impaired. They did, however, develop a tolerance to the sedative effects of chlorpromazine.

Failure to reproduce the clinical picture led us to the use of a new chemical agent, dipyrrolidino butyne, studied initially by Everett et al (5,13) and named Tremorine. This compound produces a parkinson-like syndrome in animals, characterized by marked tremors and salivation. It thus became possible to study the activity of several antiparkinson agents against chemically-induced tremors. It will be recalled that Bovet and Longo (6) had used activity

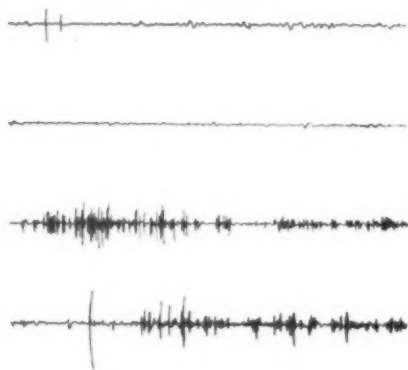


FIG. 1. Polygraph tracing of activity of mouse.

Top line — spontaneous, control activity.

2nd line — 30 min. after a control injection s.c. of saline.

3rd line — 30 min. after an injection 20 mg./kg. Tremorine.

Bottom line — 60 min. after the Tremorine.

Note the almost continuous tremors with relatively few gross movements superimposed on them.

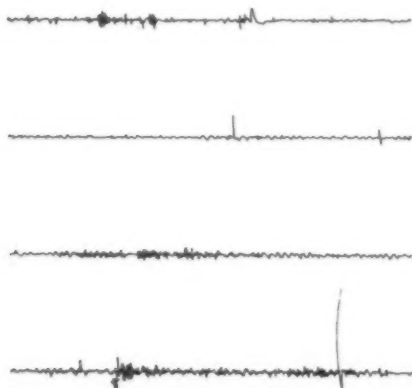


FIG. 2. Same as Fig. 1.

2nd line — 30 min. after an injection of Procyclidine (275 mg./kg. subcut.).

3rd line — 30 min. after the injection of Tremorine.

Bottom line — 60 min. after the injection of Tremorine.

Note the great reduction in the tremors compared with those in Fig. 1, and the occurrence of only one gross movement during the bottom trace.

against nicotine-induced tremors to screen antiparkinson agents, but it seemed to us that the relation between the effect of Tremorine and clinical parkinsonism was closer.

In our experiments male mice, weighing between 25 and 40 grams, were used. A small powerful alnico magnet was fixed subcutaneously on the back of each mouse's neck under general anaesthesia; later the magnet was merely taped on. After several days for recovery, the mice were placed in small plastic cylinders, each wound with a fine coil according to the method of Moore, Sigg and Schneider (30). The coils were connected to an EEG preamplifier and the electrical activity was recorded with a Grass multi-channel polygraph, at a sensitivity of 30 microvolts per centimetre. The mouse was placed in one of the plastic cylinders and the end of the cylinder was closed. The cylinder was kept warm by a lamp. After allowing 15 minutes for the animals to settle down, a tracing of the normal activity was taken. Then the mouse was injected subcutaneously with one of the following solutions: physiological saline 1 ml./kg., Procyclidine ("Kemadrin") 275 mg./kg., Diethazine ("Diparcol") 275 mg./kg., or Ethopropazine ("Parsitan") 275 mg./kg. Thirty minutes later a tracing was made and then the mouse was injected with Tremorine 20 mg./kg. intraperitoneally. The mouse remained in the cylinder and further tracings were made at 30 and 60 minutes after the Tremorine injection. The experiment was arranged so that each mouse would receive each treatment once, but the order of treatment was randomized. Figure 1 shows the effects of Tremorine. The upper line is the tracing 30 min. after the control injection of physiological saline, the second and third lines show the marked tremors 30 and 60 mins. after the intraperitoneal injection of Tremorine. One mouse died after the Procyclidine injection on the first experimental day, one on the second, and one on the third; these were replaced

in the series. In addition, two died on the fourth experimental day. The results are shown in Figures 2, 3 and 4 and are summarized in Table I. Procyclidine gave partial protection against Tremorine in a statistically significant number of rats, but in the dose used, five of sixteen animals died; Ethopropazine and Diethazine gave complete protection to a significant number and did not kill any. On comparing the numbers partially or completely protected by the anti-parkinson agents, Diethazine is significantly (p less than .01) more effective than Procyclidine; Ethopropazine is not. On the other hand, both Ethopropazine and Diethazine produced hyperactivity in a significant (p less than .01 and .05 respectively) number of animals (See Fig. 5).

It was observed that the three anti-parkinson compounds all reduced or prevented the marked salivation produced by Tremorine.

Another series of experiments was performed in which motor coordination was measured (20) by making the mice run on a slowly-rotating (7 r.p.m.) wooden roller before and 30 and 60 minutes after receiving 275 mg. per kg. of Procyclidine, Diethazine or Ethopropazine. Ten mice were tested with each drug: of those treated with Procyclidine four showed ataxia at both 30 and 60 min. and three died; with Ethopropazine two showed ataxia and one died; with Diethazine only one showed ataxia and only one died.

The doses used in this study were large, but it was decided to use the largest possible doses in order to test whether Tremorine-induced tremors could be blocked. The LD_{50} for mice by intravenous injection is said to be 45 mg./kg. for Diethazine (41) and 60 mg./kg. for Procyclidine (32). The LD_{50} by oral administration for Diethazine is 450 mg./kg. and for Ethopropazine is 720 mg./kg. (17). It was also claimed (32) that a dose of 300 mg./kg. of Procyclidine was not toxic to mice by the



FIG. 3. Same as Fig. 1.

2nd line — 30 min. after an injection of Diethazine (275 mg./kg.).

3rd and bottom lines show that no real tremors occurred 30 and 60 min. after the Tremorine.

subcutaneous route. We were unable to find comparative figures on the toxicities by subcutaneous injection. Although from these figures one would expect Diethazine to be the most toxic, the results show that at doses of 275 mg./kg. Procyclidine was the most toxic, then Ethopropazine and, last, Diethazine.

It will require further research to show whether the protection afforded by

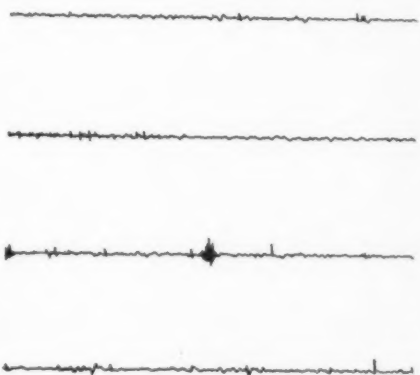


FIG. 4. Same as Fig. 1.

2nd line — 30 min. after an injection of Ethopropazine (275 mg./kg.).

Complete absence of tremors 30 and 60 min. after Tremorine.

TABLE I — ANTI-TREMORINE ACTIVITY OF ANTI-PARKINSON DRUGS

Treatment	No. of Rats	No. completely blocked		No. partially or completely blocked		No. showing drug-induced hyperactivity	No. dead after treatment
		30 min.	60 min.	30 min.	60 min.		
Saline	16	0	0	0	0	0	0
Procyclidine	16	3	2	6	5	3 mild	5
Ethopropazine	16	8	7	8	8	9 5 mild 4 moderate	0
Diethazine	16	13	10	15	15	5	0

various drugs against the effects of Tremorine is related to their clinical efficacy against drug-induced parkinsonism. Bovet and Longo showed that preparations useful in the treatment of Parkinson's disease are effective against nicotine-induced tremors in rabbits, but there was no parallelism between the anticonvulsant effect against nicotine

and other excitants of the central nervous system (6). It is not yet known whether the same is true for protection of mice against Tremorine.

Anti-parkinson therapy has recently been reviewed by Doshay (11) and by Schwab and England (38). The use of a phenothiazine derivative in the treatment of parkinsonism was first reported in 1946 by Sigwald, Bovet and Dumont (39). They introduced Diethazine. Later, Duff in England (12) and Schlesinger in the United States (36) confirmed its value in parkinsonism. In 1949 Sigwald (40) claimed that Ethopropazine was more effective than Diethazine and several other phenothiazine derivatives. Palmer and Gallagher (33), Garai (17), and Gillhespy (18) in Britain, and Timberlake and Schwab (43) in the United States, all studied its clinical effectiveness. The anti-parkinson activity of Procyclidine was described by Montuschi, Phillips, Prescott and Green (32) in 1951. Schwab and Chafetz (37) introduced it into North America, and Zier and Doshay (44) claimed that it was a valuable anti-parkinson agent. In the treatment of phenothiazine-induced parkinsonism Goldman claimed (19) good results "with the anti-parkinson drugs, particularly Cogentin (Benztropine), Kemadrin (Procyclidine) and Pagitane", and Freyhan (16) stated that Procycli-

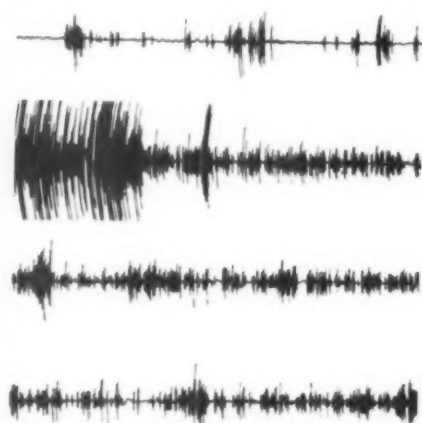


FIG. 5. Same as Fig. 1.

2nd line — 30 min. after an injection of Ethopropazine (275 mg./kg.).

Note the gross hyperactivity (2nd line) 30 min. after the injection of Ethopropazine and before the Tremorine was given.

In the 3rd and bottom lines some of the gross hyperactivity persists, although tremors are few or absent.

dine was especially effective in ameliorating the tremors and rigidity of the phenothiazine-induced extrapyramidal syndrome. Konchegul also used Procyclidine in drug-induced parkinsonism and stated (27) that with a total of 30,000 doses in 82 patients no toxic manifestations were reported.

Although, in general, the same drugs are used to treat Parkinson's disease and the extrapyramidal syndrome induced by phenothiazine derivatives, it is not yet established whether the order of potency of the drugs is the same in the two conditions. There are important differences (16) between idiopathic, post-encephalitic and drug-induced parkinsonism: women develop the syndrome twice as frequently as men on phenothiazine therapy and younger patients of both sexes are more commonly affected. On the other hand, men develop "torsion" spasm and dysphagia more frequently than women. It is likely that in the future other differences besides sex and age distribution will be found. Meanwhile, it would appear that the problem of chemically-induced extrapyramidal toxicity will be with us for some time.

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Résumé

L'article passe brièvement en revue la fréquence et l'ampleur du problème de la toxicité, pour le système extra-pyramidal, provoquée par les drogues. Certains psychiatres estiment que pour obtenir des modifications des manifestations psychotiques, il est souvent nécessaire d'augmenter la posologie des phénothiazines jusqu'à ce que le parkinsonisme

fasse son apparition, tandis que d'autres croient que cette manifestation du parkinsonisme n'a pas d'importance parce que l'on dispose de bons agents contre cet état. Il ressort donc bien clairement qu'il faudra encore beaucoup d'autres recherches si l'on veut connaître le mode d'action de ces importants agents thérapeutiques. L'article présente un rapport d'une investigation préliminaire

de l'efficacité de plusieurs agents anti-parkinsoniens dans la suppression des tremblements et de la salivation produits par la dipyrrolidinobutyne (Tremorine) chez la souris. On ne sait pas encore si l'activité anti-Tremorine peut servir à faire découvrir les composés qui se révéleront utiles dans le traitement du parkinsonisme clinique provoqué par les drogues.



A. E. Bennett Award

The Society of Biological Psychiatry is offering an annual award which was made possible by the A. E. Bennett Neuropsychiatric Research Foundation. The award will consist of \$500 part of which is to be used for travelling expenses to the meeting. It will preferably be given to a youngish investigator and not necessarily a member of the Society of Biological Psychiatry, for work which has recently been accomplished and not published. The paper will be read as part of the program of the annual meeting of the Society and will be published with the other papers read at that meeting in the book: **BIOLOGICAL PSYCHIATRY**, Volume IV. The honorarium will be awarded at the annual banquet. Please submit paper in quadruplicate to Harold E. Himwich, M.D., Chairman, Committee of Award, Galesburg State Research Hospital, Galesburg, Illinois. Deadline for manuscripts is April 30, 1961.

QUELQUES ASPECTS THEORIQUES DE LA PSYCHIATRIE EN RUSSIE ET AUTRES PAYS DE L'EUROPE DE L'EST*

THOMAS A. BAN ET JACQUES ST-LAURENT[†]

Introduction

La lecture du journal que l'un de nous rédigea lors d'une tournée des centres psychiatriques des pays balkaniques, (Roumanie, Bulgarie, Yougoslavie) nous incite à conclure que la pratique psychiatrique dans les pays de l'Europe de l'Est, en dépit de la socialisation de la médecine, ne diffère guère de celle des pays de l'Ouest. On note un nombre insuffisant de psychiatres et leur distribution est inadéquate. Les grands hôpitaux psychiatriques fermés sont desservis par quelques psychiatres, alors que les quelques institutions de recherche et d'enseignement absorbent la majorité d'entre eux. L'aspect diagnostique et la symptomatologie reçoivent plus d'attention de leur part. La psychopathologie plutôt que la dynamique est au premier plan. La psychothérapie ne reçoit pas l'importance que nous lui donnons ici et elle est envisagée sous une optique différente. La recherche, très intensive, s'appuie sur les travaux de Pavlov.

Dans cet article nous tâcherons d'exposer, le plus objectivement possible, les données théoriques de leur approche sans discuter leur valeur et leur bien fondé. Nous débiterons par une citation tirée de la communication de Bykov à la réunion annuelle de l'Association Américaine de Psychiatrie en 1958. Parlant de la psychiatrie pavlovienne contemporaine en Union Soviétique, il déclara: "La psychiatrie comme toute science reflète dans son développement toutes les prémisses générales qui prévalent dans un monde scientifique donné." Pour comprendre le sens réel à donner à cet énoncé, il est nécessaire d'avoir une compréhension fondamentale de la psychiatrie soviétique. En effet, Bykov lui-même en faisant

cette citation actualise le matérialisme historique en affirmant que la psychiatrie soviétique, comme toute science à tel ou tel moment donné de son évolution, reflète l'influence de son milieu social. Chaque classe sociale apporte un système d'idées, un système d'institutions sociales et de psychologie humaine dérivant de l'organisation économique en vogue.

Afin de jeter plus de lumière sur ce sujet, nous passerons brièvement en revue l'arrière plan philosophique servant de base au matérialisme dialectique. Ensuite nous ferons un court historique de la psychiatrie soviétique. Nous verrons comment elle en est venue à adopter la méthode pavlovienne. Nous exposerons brièvement en quoi consiste cette dernière. Nous ferons ensuite une courte revue de ses méthodes d'investigation et de ses applications cliniques. Enfin, nous terminerons en exposant la pensée soviétique sur la psychanalyse et la psychothérapie.

Concepts philosophiques de base du matérialisme dialectique

Selon la pensée matérialiste, le monde est un cosmos matériel régi par des lois matérialistes. Même l'esprit et ses phénomènes mentaux ne sont rien d'autre "qu'un dérivé de", qu'une fonction, soumis à la matière. La réalité de cette matière est complètement indépendante de la pensée et elle continuerait d'exister même si elle n'était pas perçue.

Marx recueille les principes de la pensée matérialiste de Feuerbach qu'il rattache aux principes de la méthode dialectique Hégélienne.

Selon Hégel, aucun phénomène n'existe par lui-même. Aucun phénomène ne peut être étudié sans considérer ses corrélations. Tout dans la nature est constamment en mouvements et les changements résultants de l'action de forces opposées,

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se manifestent par des bonds subits. C'est aussi un des principes dialectiques que des changements quantitatifs mènent soudainement à des différences qualitatives. Les conglomerés nouvellement développés assument des qualités différentes au sein de leurs parties composantes.

A partir de ces conceptions matérialistes et dialectiques, il est compréhensible que les psychiatres se soient intéressés aux bases matérielles de la pensée et à l'essence de la vie sociale dans laquelle évolue l'activité mentale de l'individu. Il se sont efforcés d'obtenir une meilleure compréhension de l'individu par l'étude des lois de l'évolution sociale.

La théorie réflexionnelle de Ulyanov (connu sous le nom de Lénine) n'ajoute rien de fondamentalement nouveau à ce cadre philosophique. Cette théorie réflexionnelle, vraisemblablement le fondement de la psychiatrie dans les pays communistes, avec les conceptions matérialistes et dialectiques, soutenait que, comme les circonstances font l'homme, les idées et les théories découlent de la vie réelle, et ne sont rien d'autre que le résultat généralisé de l'expérience.

Relier l'homme à son mode d'existence devint une des principales préoccupations de la psychologie. L'observation des pensées ou de la psychologie de l'individu, est remplacée par l'étude de la situation de l'individu ou de son status dans la société. La psychologie ne pouvait plus se limiter à la seule étude du comportement de l'homme. Elle étendit son champ à l'examen des interactions constantes entre l'expérience de l'homme et son fonctionnement mental.

Appliquées à la psychiatrie, ces conceptions donnèrent une importance majeure à l'environnement social et à la physiologie, minimisant ainsi les influences psychologiques directes et l'apport psychothérapique. De plus, même si le psychiatre acceptait que le traumatisme psychique puisse provoquer une psychose, il en était amené d'une part à chercher quelles étaient les susceptibilités physiologiques de l'organisme qui per-

mettaient la réponse pathologique, et d'autre part à essayer de transformer les manifestations psychologiques par un changement du contexte matériel. Cette école de pensée envisage donc tout aussi bien les aspects sociaux, neuropsychiatriques et somatiques des troubles mentaux.

Selon Gurevit, la physiologie, la neurologie, la psychologie, ne peuvent par elles-mêmes édifier une théorie psychiatrique, incapables qu'elles sont de fournir un procédé, une méthodologie générale. Cependant, cette méthodologie doit être construite sur les mêmes bases matérielles que les autres sciences. Tel que mentionné au début, toute science, à un moment donné, reflète l'influence exercée sur elle par son milieu social, et ceci à travers la pensée philosophique prédominante, dans le cas de l'U.R.S.S.: philosophie matérialiste dialectique. Il est compréhensible ainsi, que Gurevit en arriva aux conceptions énoncées plus haut, et qu'il établit en outre qu'il est impossible d'appliquer les lois psychologiques déduites de l'observation de gens normaux à la compréhension des psychoses. Dans les fonctions altérées du cerveau, les lois psychologiques ne s'appliquent pas, parce que dans le cerveau altéré il y a des changements quantitatifs amenant des changements qualitatifs. De plus, selon lui, les phénomènes simples de la réflexologie ne peuvent expliquer totalement les phénomènes complexes de l'esprit. Ainsi, il est impossible de traduire les lois physiologiques en des lois psychiatriques, parce que les lois psychiatriques embrassent des phénomènes mentaux qui opèrent à un niveau plus complexe que celui de la physiologie. Néanmoins, il reste que les phénomènes mentaux anormaux des psychoses, sont les produits de la réalité objective, troublée et déformée par la perturbation des mécanismes d'intégration qui sont eux-mêmes des phénomènes réels et objectifs. En effet, l'influence de la théorie réflexionnelle de Lénine amène Gurevit à émettre que les processus mentaux sont

le résultat d'un jeu de réflexion avec l'extérieur. Si les mécanismes d'intégration sont troublés, le malade ne peut réfléchir qu'un monde faussé et déformé. De plus, le processus constant de réflexion avec le monde extérieur est nécessaire pour le fonctionnement adéquat du mécanisme d'intégration. Le traitement psychiatrique actif vise donc à la réintégration de ces fonctions chez le malade mental.

Aperçu sur l'évolution de la psychiatrie soviétique et l'approche pavlovienne

Au début du XXe siècle, les conceptions physiologiques dominantes étaient celles qu'on obtenaient par les méthodes de vivisection et d'expérimentation avec des organes et tissus étudiés séparément. Plus tard avec Bonhoeffer, Klut, Liepman, Potzl, Meynert et Wernicke, les efforts s'orientèrent vers la corrélation entre la psychopathologie et l'anatomie pathologique du cerveau.

A l'instar des psychiatres d'autres pays, les psychiatres russes ont fait un usage théorique des concepts physiologiques plus récents, tel que ceux d'intégration de Sherrington, et d'homéostasie de Cannon. Mais à l'heure actuelle, on reproche à Sherrington de ne pas avoir tenu compte des caractéristiques spécifiques des fonctions supérieures du système nerveux central et de leur évolution dans l'ordre ascendant, i.e. adaptabilité, mutabilité et expérience acquises au cours de la vie. Par ailleurs les hormones dépendent du système nerveux central, on ne peut pousser indéfiniment les spéculations sur le rôle autonome des hormones dans l'activité de l'organisme. Ce serait séparer l'endocrinologie du tout qu'est l'organisme.

Dans un autre ordre d'idées, concernant la psychologie behavioriste, on fait remarquer que celle-ci définit seulement le chaînon initial et le chaînon terminal de l'acte. L'intermédiaire principal, le mécanisme central, échappe à l'investigation scientifique.

Quelles sont les principales étapes du courant historique qui ont amené la psychiatrie dans les pays communistes à opter pour la philosophie dialectique matérialiste et l'approche pavlovienne? D'après Razran, dans son article sur la "psychologie et la psychophysiologie soviétique", depuis la fin de la première grande guerre, quatre périodes semblent prédominer. De 1917 à 1923, la période "réflexologique"; de 1923 à 1931, la période "réactologique"; de 1931 à 1950, la période qu'il appelle "cognition non-ancrée" (unanchored cognition); et de 1950 jusqu'à nos jours, "cognition ancrée" (anchored cognition).

Durant la première période Bechterev utilisa les expériences de Pavlov dans l'application de la réflexologie à la psychiatrie. Cette école, bien que très active au début, disparut bientôt car on la jugeait trop mécanique.

La réactologie de Kornilov étudia le réflexe, mais sans tenir compte du concept volonté. L'école maintenait un principe de totalité: le comportement total domine le comportement réactionnel et le comportement social domine le comportement individuel. Elle maintenait également un principe de prépondérance socio-économique: alors que la forme des réactions peut-être déterminée biologiquement, leur contenu est social, spécifiquement économique, et l'homme en général est fonction d'une classe économique particulière. Les accusations qui ont conduit à la condamnation de cette conception furent que l'homme, comme simple organisme réactionnel, est un concept trop passif; et que la réactologie conduit à l'épiphiénoménalisme. L'un et l'autre sont en désaccord avec le matérialisme dialectique; ou tout simplement, la réactologie a failli parce qu'elle excluait le conscient et son rôle directeur dans la transformation de l'homme, de la société, et de la nature.

La psychologie soviétique se tourna alors vers une psychologie cognitive très particulière. Elle rejeta la psychologie de la Gestalt, la phénoménologie, le fon-

tionalisme, la psychanalyse. Elle ressemble au cognitivisme du dix-huitième et dix-neuvième siècle, côtoyant alors la scholastique; c'est pourquoi Razran l'appela "non-anchored".

"Anchored cognition" (1950): la physiologie pavlovienne devint la base méthodologique des essais de compréhension des bases matérielles des processus de connaissance. La pensée et l'imagination par exemple, sont reliées au concept du langage comme un "système de signalisation secondaire".

Avant de considérer ce qu'après quelques années d'essais, les psychologues et psychiatres soviétiques ont pu tirer de cette approche, disons d'abord quelques mots sur l'approche pavlovienne elle-même.

Pavlov pensa qu'il était logique d'inférer que si l'activité psychique est le résultat du fonctionnement d'une masse définie du système nerveux, son étude doit procéder suivant des lignes physiologiques; ainsi, le premier but de Pavlov fut de trouver un phénomène élémentaire psychique qui puisse en même temps être considéré comme un phénomène authentiquement physiologique. Ce phénomène c'est le réflexe conditionné. Pavlov énonça aussi que "l'homme est un système . . . comme tout autre système dans la nature, sujet aux lois de toute la nature mais unique en ce qu'il est hautement autorégulateur. A partir de ce principe, il est évident que la méthode d'investigation de ce système de l'homme est la même que celle de tout autre système."

Pavlov conçoit l'organisme humain comme un système existant dans la nature par un constant équilibre avec l'environnement. Le schéma de ce mécanisme pour la corrélation complexe avec l'environnement est le suivant: Au premier niveau, ceci est réalisé par le subcortex avec ses réflexes non-conditionnés. Ces réflexes sont peu nombreux, par conséquent l'adaptation à ce niveau est faible.

Le second pas dans la corrélation est faite par les hémisphères cérébraux mais

sans les lobes frontaux. Ici se forment grâce aux connexions conditionnées, les associations, un nouveau principe d'activité. La signalisation au cortex de quelque agent extérieur non-conditionnel (nourriture pour réflexe non-conditionné de salivation) par de nombreux autres agents non-spécifiques (mots, cloches, etc.) rend possible une adaptation plus grande. Dans la connexion non-conditionnée un stimulus donne toujours naissance ou signale la même réponse. Dans la connexion conditionnée, le stimulus est non spécifique et peut donner lieu à la même réponse que le stimulus non conditionnel originel. Le réflexe conditionné une fois formé peut disparaître. Cependant la connexion physiologique s'étant établie une fois, ne disparaît pas complètement mais est supprimée temporairement. La théorie pavlovienne ajoute que la formation de ce phénomène physiologique central est déterminée par les processus de base du système nerveux, i.e.: les processus d'excitation et d'inhibition. Enfin l'inhibition ultramaximale ou protectrice est caractéristique de toutes les parties du système nerveux. Elle prend place quand la stimulation excède les capacités du système nerveux. Dans les conditions pathologiques, même les stimuli de force ordinaire peuvent provoquer une inhibition ultramaximale.

Dans les lobes frontaux s'ajoute un autre système de signalisation qui signale le premier système. Ce nouveau système est la parole dont la composante fondamentale est la stimulation cinétique des organes de la parole. Ici intervient un nouveau principe d'activité supérieur: l'abstraction et en même temps la généralisation d'une multitude de signaux du système précédent. Ce second système de signalisation est le dernier échelon dans l'évolution, la fonction du langage étant la base de la pensée et des hautes émotions.

Finalement pour Pavlov, les réflexes conditionnés, comme il l'exprimait dans une lettre à Pierre Janet, semblent exister pour tous les organes et tissus. L'orga-

nisme humain a dans son tout et dans ses parties, sa représentation dans le cortex des hémisphères cérébraux. Ainsi Pavlov introduisit le nervisme, "une tendance physiologique qui aspire à étendre l'effet du système nerveux sur toute l'activité de l'organisme."

Mentionnons en terminant cette section de notre étude, que ce groupe de phénomènes formé sur des réflexes conditionnés déjà établis (phénomènes appelés par Ivanov-Smolensky réflexes conditionnel-conditionnés) peuvent ne donner aucune manifestation extérieure, mais se manifester intracorticalement comme une sorte de conversation intérieure ou encore en des sentiments ou des émotions. Ils peuvent également entrer en connexion avec les réactions cortico-viscérales sur lesquelles nous dirons quelques mots dans la prochaine section de notre article. L'établissement de ces connexions physiologiques centrales serait déclenché par des stimulations simultanées à diverses parties du cortex et des centres subcorticaux.

Approche expérimentale. Méthodes d'investigation. Applications cliniques

Les méthodes de recherche dans les pays de l'Est, en général, sont similaires à celles des pays de l'Ouest. La principale différence réside dans le fait que l'approche pavlovienne y domine.

Les expériences réalisées par les russes sont variées et parfois étonnement spectaculaires. Il en est ainsi des recherches sur le conditionnement, relatives à nombre de maladies, de médicaments, de diètes, d'ablations de tissus, et aussi des recherches réalisées sur le phénomène de l'excitation sexuelle, de la castration, de la grossesse, etc.

Les processus de base d'excitation et d'inhibition sont présentement à l'étude sur le plan électrophysiologique. Mentionnons que dans l'étude de la dynamique intercorticale, les travaux de Gastaut, Jasper, Magoun, Moruzzi et Penfield sont hautement estimés par le bloc de l'Est.

A ce sujet ils ont fait beaucoup de recherches sur le conditionnement intéroceptif, ou vicéro-viscéral et viscéro-somatique. Par exemple conditionnement du pancréas à sécréter quand la vésicule biliaire est stimulée, ou vice versa. Et réaction motrice de la patte d'un animal à un changement intraviscéral.

De nombreuses explorations ont également été faites dans le domaine de l'intéraction sensorielle.

Les russes n'ont jamais abandonné l'étude neurologique du processus de la connaissance, et les travaux dans ce domaine sont nombreux.

La psychophysiologie soviétique a aussi fait, durant ces dernières années, d'importantes contributions à notre connaissance du conditionnement verbal, c'est-à-dire, à l'établissement de réflexes conditionnés à des stimuli verbaux. Signalons par exemple l'expérience de Markosyan, qui conditionne d'abord la coagulation du sang au son d'un métronome, à la signalisation d'une lampe électrique et démontre que ce conditionnement se transfère aux mots "métronome" et "lampe"; ainsi qu'à des mots sémantiquement et phonétiquement apparentés. Volkova découvre que, chez de jeunes écoliers le réflexe de salivation d'abord conditionné positivement au mot "vrai" et négativement au mot "faux", s'étendait fidèlement aux phrases vraies et fausses: par exemple, à "8 divisé par 2 fait 4" versus "10 divisé par 2 fait 3". De toute évidence, ces expériences ont une grande signification à la fois théorique et pratique pour le contrôle du comportement humain.

Pavlov au début de ce siècle commença à explorer les relations entre les médicaments et le processus conditionnel. Il fit également des travaux initiaux dans le domaine des névroses expérimentales, dans la typologie et dans les états fonctionnels neuro-pathologiques. Une série d'expérience plus récentes, combinant des données pharmacologiques et neurophysiologiques relatives aux processus de la

connaissance, semble devoir être citée comme exemple de la haute qualité du travail des russes. Anokhin implante trois paires d'électrodes dans le cortex, le thalamus et le système réticulé de lapins, préalablement conditionnés à refuser de manger (carottes) dans une lapinière dans laquelle ils avaient précédemment reçu des chocs électriques. Les effets neurologiques du conditionnement se traduisirent par des désynchronisations électroencéphalographiques quand les animaux furent placés dans cette lapinière. Mais après administration de chlorpromazine, le conditionnement disparut; les lapins acceptèrent la nourriture et la synchronisation électroencéphalographique fut restaurée.

Dans le domaine de la recherche clinique, mentionnons le travail fait par le professeur Popov sur la schizophrénie. Il aborde le problème sous cinq angles différents: (1) électrophysiologie; (2) réflexe conditionné; (3) investigation du langage des schizophrènes; (4) neuropathologie; et (5) biochimie. D'après ses études, dans le tableau clinique de la schizophrénie, la tendance générale aux niveaux supérieurs du système nerveux central, est à l'inhibition. Le tableau clinique de la catatonie serait le résultat de l'inhibition du cortex et de la désinhibition des niveaux sous-corticaux. Selon Bleuler et Schneider, la pensée schizophrénique est comme la pensée de l'état de rêve, car explique Popov, le rêve comme l'état schizophrénique est le résultat d'une inhibition particulière du cortex.

Dans la phase maniaque des psychoses maniaco-dépressives, il y aurait désinhibition au cortex.

Dans le cas des états obsessionnel-compulsifs nous aurions un centre avec excitation prolongée où l'inhibition n'est pas possible.

Nombre de travaux ont pour but l'étude des mécanismes nerveux de l'épilepsie et des altérations physiopathologiques de l'activité nerveuse supérieure qui accompagne cet état.

Le point de vue soviétique sur la psychanalyse et la psychothérapie

La psychanalyse, selon l'encyclopédie soviétique est l'école de Freud impliquant (a) une méthode de traitement des névroses basée sur le dévoilement du matériel subconscient; (b) une théorie de la structure du psychisme humain et des processus mentaux inconscients. La psychanalyse et les théories de Freud sont actuellement rejetées en Russie pour les raisons que nous verrons plus loin.

Vers 1930, Luria considérait le freudisme comme susceptible de servir de base au développement d'une psychologie marxiste. Quelques années plus tard, on jugea que le freudisme était une tendance ultraindividualiste en science parce qu'il regardait la vie sociale comme la somme mécanique du comportement des individus, et qu'il impliquait que l'influence du milieu se limitait à celle qu'il exerçait sur le conscient. On l'accusa de ne pas avoir compris l'influence des conditions sociales sur le comportement de l'homme et de tout expliquer par des forces psychiques et biologiques. Les psychiatres soviétiques soutenaient au contraire que certains milieux sociaux peuvent être la source de névroses, non par freinage des instincts, mais parce qu'ils renferment de nombreuses contradictions. Et si Freud avait soutenu que la libido a ses bases dans la physiologie, il l'avait étudiée comme un phénomène purement psychique. Selon Bykov, l'intégration du psyche en ça, moi et surmoi, ainsi que l'hypothèse que l'énergie psychique est un quête de voie d'issue, sont arbitraires et non prouvées, la théorie de la prédominance des instincts et d'un subconscient est en désaccord avec les données neurophysiologiques modernes et la psychologie de l'homme en tant qu'être social.

L'encyclopédie soviétique définit la psychothérapie comme l'ensemble des méthodes qui traitent les troubles mentaux par influence psychologique. Vers 1930, elle fut utilisée assez intensément par les psychiatres russes. En 1934, Kulakova et

Feldman prétendaient encore que le principal facteur thérapeutique dans le traitement du schizophrène était l'établissement d'un contact émotionnel avec le médecin traitant. Depuis cette date, comme nous l'avons vu auparavant dans notre bref historique de la psychiatrie soviétique, les conceptions ont changé. C'est ainsi que Gurevick déclare que tout médecin fait de la psychothérapie en ce sens qu'il est un stimulus externe susceptible d'influencer le cortex des hémisphères cérébraux. Cette influence s'exercerait principalement par l'intermédiaire du mot au sujet duquel Pavlov a dit: "Chez l'adulte humain, à cause de ses expériences antécédentes, un mot est relié à tous les stimuli externes et internes qui viennent aux hémisphères cérébraux. Il les signale tous, il les remplace tous et par conséquent, peut évoquer toutes ces actions et réactions de l'organisme que ces stimuli sont susceptibles de produire."

Vraisemblablement les méthodes et conceptions de cette psychothérapie, très apparentée à la théorie cortico-viscérale, diffèrent profondément du type de psychothérapie en faveur sur le continent nord américain. Ces différences sont les mêmes qui opposent la théorie psychosomatique et la théorie cortico-viscérale. Alors que la psychosomatique essaie d'expliquer la maladie somatique par une cause psychique, la théorie cortico-viscérale ne dissocie pas la pensée du cerveau, ne divise pas l'organisme humain en deux parties: esprit et corps. Elle affirme que l'organisme est un système intégral dont le cortex est en communication avec les organes internes, et que les organes eux-mêmes sont en relation intime avec le milieu externe. Alors que la théorie psychosomatique, basée sur le concept de causalité psychique favorise les méthodes psychiques, la théorie cortico-viscérale donne la préférence aux traitements physiologiques. Sur le plan "intrapersonnel", elle utilise surtout les différents types de thérapies physiques et chimiques auxquels sur le plan interpersonnel, elle ajoute une aide psychothéra-

peutique prodiguée par le praticien, le spécialiste ou le psychiatre. Les méthodes employées sont très simples: conversations, organisation de la routine journalière, thérapie d'occupation, thérapie de travail et plus tard rééducation de la personnalité et exploitation rationnelle des potentialités de l'individu. Les troubles mentaux de moindre importance sont traités par l'éducation de masse, critiques sociales, arrangements sociaux, plutôt que par le psychiatre seul. L'assistance proprement psychiatrique est plutôt réservée aux maladies mentales qui causent le plus de souffrances aiguës aux patients, à leurs familles, et qui limitent leurs activités personnelles.

Sommaire

Dans cet article, nous avons essayé de présenter quelques aspects théoriques de la psychiatrie en Russie et autres pays de l'Europe de l'Est. A cette fin, nous avons faits quelques considérations sur l'arrière plan philosophique: le matérialisme dialectique orientant le développement de la pensée scientifique en U.R.S.S. Dans un court historique de la psychiatrie soviétique, nous avons vu comment elle en est venue à adopter l'approche pavlovienne et ce qui caractérise cette dernière. Les méthodes d'investigation et certaines applications cliniques furent brièvement passées en revue. Nous avons terminé par un court exposé de la pensée soviétique sur la psychanalyse et la psychothérapie.

1. Les auteurs remercient les docteurs D. E. Cameron, H. E. Lehmann, M. Lemieux, C. Sterlin et F. St-Laurent pour leurs critiques et suggestions.

Summary

In this article, we have tried to present some theoretical aspects of psychiatry in Russia and other Eastern European countries. A consideration of the philosophical background reveals that the dialectical materialism which is prevalent in the U.S.S.R. is primarily responsible for the development of scientific thought in Russia. In reviewing soviet psychiatry, it was shown how it came to adopt the

Pavlovian approach and what essentially constitutes this approach. Methods of experimental investigation and some clinical application were briefly considered. Finally, soviet thought on psychoanalysis and psychotherapy was outlined.

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SOME OBSERVATIONS ON THE "OPEN DOOR" IN CANADIAN AND OTHER HOSPITALS*

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At its 10th meeting in January 1959, the Advisory Committee on Mental Health asked the Department of National Health and Welfare for

"... a statement as to what progress has been made across the country with regard to the problem of the open door policy for mental hospitals." (2).

It was decided to make a questionnaire survey of provincial mental hospitals and to base the statement on the resulting data. Background material for the survey resulted in an historical paper on the concept of the 'open door' by Gilbert (1) and a critical review of the literature by the present author (4).

Method

From discussions with hospital superintendents, other leaders in the mental health field and by reference to the literature, a questionnaire was prepared to cover important aspects of open door policies and practice. For the sake of convenience, the questionnaire was broken into two sections, one on 'hospital policy', one on 'ward policy'. The completed questionnaires then were shown to a sample of mental hospital superintendents whose criticisms were used to improve the wording. The final questionnaire was sent to the Provincial Mental Health Directors, who were asked to pass an appropriate number of forms to each of their mental hospitals and schools for the mentally retarded in their charge. The questionnaire also was forwarded to Dr. W. S. Maclay, Senior Commissioner, Board of Control, Ministry of Health in Britain, who submitted the forms to Dr. E. S. Stern, Central Hospital, Warwick, for completion. Dr. Herman B.

Snow of St. Lawrence State Hospital, Ogdensburg, N.Y. also received a set of forms. Both of these hospitals are universally known for progressive open door programs.²

Results and Discussion

Data were requested from 40 mental hospitals in the 10 provinces of Canada and from the two above-mentioned hospitals outside the Dominion. Replies were received from 28 of the Canadian hospitals, data from 26 of which were found to be suitable for the survey. Thus the report deals with 26 of 40 hospitals totalling 483 wards in seven provinces (although some questions were not answered by all hospitals). In view of no report from three provinces the data cannot be considered representative for Canada. Both hospitals outside the Dominion forwarded data.

The questionnaires apparently were completed by various staff members (e.g. ward supervisors, physicians in charge of wards, hospital superintendents). That this could lead to differential interpretation of a question is obvious. Also there were questions not answered and answers that had to be interpreted. In many instances, the respondents supplied information permitting relatively easy interpretation.

Thus, it is clear that the survey material must be treated with caution. However, it would appear that the results profitably can be looked upon as a good first approximation to the actual situation, perhaps a little on the positive side.

Tyhurst (3) properly is concerned over the inadequacy of the questionnaire

*The full report is not for general publication but it is recognized that many of the items might be of interest to a wider public and thus it appears desirable to make some of the data easily available. The present paper is a selection of the data from the full report.

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²The appreciation of the Mental Health Division is extended to the many people who were so kind as to complete the questionnaire and to do so during the summer months when hospital organization is under the added strain of staff shortage owing to vacations. A further burden was the time limit imposed for receipt of data. Under the circumstances the co-operation of administrators and their staffs was far greater than there was any reason to expect.

TABLE NO. 1:
Attitude to Opening of Wards — Staff and Patients

	Favourable	Mixed	Unfavourable	Not Known	Not Applicable
Administration	17	2	2	3	2
Medical Staff	18	3	1	2	2
Nurses	9	12	0	3	2
Patients	17	5	0	2	2

method and, in addition to the deficiencies mentioned above, has noted that there is a tendency for readers of 'normative studies' to feel that what is done by most is what should be done. In the complete report an effort was made to keep evaluative comments to a minimum and, where made, under careful restraint. The present paper is a more discursive type of presentation, *the author having taken the liberty of presenting an interpretation of the sense of the data rather than a more detailed analysis.*

Hospital Policy

Opening the doors of a hospital can be a big or little change depending on how the step is taken and what other factors of control are present. The survey attempted to test for these other factors such as walls, supervision and so on. Results indicate that none of the reporting hospitals possesses a restrictive fence or wall surrounding the hospital. On the other hand, most of the Canadian hospitals make use of grounds supervision and in more than half of these, the control applies to open ward patients. Neither of the hospitals outside Canada has a restrictive fence nor makes use of grounds supervision, although St. Lawrence State reports a certain amount of attention to the elderly and confused in case they fall down and to prevent them from getting lost.

A question of some importance deals with the attitude of staff and patients before wards are opened. Table No. 1 represents survey data.

The predominantly favourable attitude of the administrative and medical staff is to be expected, for the initiative and responsibility of opening wards falls mainly upon their shoulders. The mixed reaction of the nurses appears to reflect a long and thorough training in a more controlled organization than an open ward, as well as a worry over adequate discharge of responsibility. The favourable attitude of the patients is a testimonial to the effect predicted by open door protagonists.

St. Lawrence State found an attitude of "healthy apprehension" in hospital staff while patients tended to be bewildered and confused at first. The healthy apprehension was not that the 'open door' policy might not work but who would carry the responsibility if something should happen. On the other hand, the administrative staff at Central Warwick adopted a somewhat neutral approach with a favourable attitude in the remaining staff (once a few nurses had overcome initial hesitation).

Table 2 gives the attitude of the public to the opening of the wards and one year later.

TABLE NO. 2:
Attitude of the Public at Opening of
Wards and One Year Later
(26 hospitals reporting)

Attitude	At Opening	1 Year Later
Favourable	9	13
Unfavourable	1	—
Not Known	3	3
Public Unaware	11	8
Not Applicable	2	2

Ward openings at Central Warwick were not known publicly for a year. Then enthusiastic newspaper articles brought a favourable response followed by a certain amount of hostility in other sections of the press which caused temporary problems only. The public attitude toward ward openings at St. Lawrence State was excellent.

Another question of importance deals with whether hospitals, before opening a ward, saw fit to provide a planned program of education for the various groups involved.

TABLE NO. 3:
Number of hospitals offering
planned educational programs to various
groups (prior to ward openings).

	Yes	No	?	Not Applicable
Hospital staff	12	11	—	3
Medical practitioners in the area	1	22	—	3
Public	—	22	1	3
Patients	12	10	1	3

It is apparent that the education of hospital staff and patients was considered important in half the reporting hospitals; medical practitioners and the public seldom were given such attention. Neither of the two hospitals outside Canada reported any planned program of education previous to opening of wards.

It was thought useful to explore the extent to which there are plans for the opening of more wards. Few of the Canadian hospitals possess a tentative timetable for further openings. Of those with no timetable, about half intend to open wards as possible. Both hospitals outside of Canada are completely open. Perhaps the most important finding in this area is that nearly all of the Canadian hospitals expect to have one or more closed wards indefinitely. (Neither

of the hospitals outside of Canada expects to have a closed ward again.) The types of patient seeming to require the control of a closed ward include court cases, confused seniles, severely disturbed psychotics and some of the mentally retarded.

There are varying opinions on the staff requirements for opening wards—whether more staff is needed, or more skilled staff, and so on. Survey results are not conclusive, although nearly twice as many hospitals reported that ward openings had been delayed by lack of adequate staff (differing kinds) as those who ran into no such delay. Neither hospital outside Canada was delayed by lack of staff.

Many open door believers have felt that the open door is mainly a symbol of a total progressive therapeutic program and thus should be instituted only in conjunction with other therapeutic measures. About half of the Canadian hospitals (and the two outside of Canada) felt that other aspects of their therapeutic programs (work settings, socialization, drug therapy) had contributed to open door policy but, interestingly enough, about a quarter did not.

Since, in many instances, wards are opened in long-established hospitals, the question arises as to the suitability of the hospital for such a program. Survey results indicate that "cottage" or "small ward" design is an aid to opening wards while three and four-storey buildings are a drawback in that very old and very young people cannot cope with stairs. Also, in many buildings of this type the wards are too large (thus almost always have a few patients unsuitable for an open ward).

In a country as cold in the winter as Canada, it might be expected that weather would have an effect on open door policy yet only half the hospitals so

reported. Those hospitals concerned over weather felt that winter curtailed privileges for some patients who might wander off and suffer from the cold. It also was noted that severe weather requires a stepped-up program of inside activities.

Ward Policy

As has been observed in a previous article (4) there is no standard definition of an open ward. Accordingly, in the survey, five stages of "openness" were devised, from completely open to completely closed. Analysis of the data permitted classification as follows. Open wards are those where ward doors are open from early in the morning until dusk and bedroom doors are never locked (or the wards are even less restricted than this). Closed wards vary from 'having doors locked at all times but certain patients are allowed off ward without supervision' to practices considerably more restrictive. Applying these criteria, 220 out of a total of 483 (or 46%) of the wards in the Canadian hospitals surveyed were classified as 'open'. Central Warwick and St. Lawrence State have opened all their wards.

A question designed to assess the importance of the new drugs in the opening of wards indicated that they are not *necessary*, since some wards were open before the new drugs were discovered. However, almost half the reporting wards found that the new drugs had helped and roughly one-quarter that they had not. The help would appear to be in the form of direct improvement of patient's health or because pharmacological control of the patient had been achieved. These data are approximated by those of the two hospitals outside of Canada.

With regard to the 'more-open ward' (a ward making gradual changes to become open), it would be natural for the increased freedom to be accompanied by closer supervision on the part of staff

—such would not result in greater freedom for the patient but rather a different kind of control. Table No. 4 gives the data accumulated on this topic.

TABLE NO. 4:
Increased freedom at cost of
increased supervision

	Number of Wards		
	Canadian Hospitals (as represented in the survey)	Central Warwick	St. Lawrence State
Yes—increased supervision	31	1	1
No—no increase in supervision	211	20	11
N/A	189	2	—
Reply Unclear	52	5	3

It seems clear that 'more-open wards' do not call for increased staff supervision.

In order to open a hospital ward, particularly a large ward, it might be expected that a few difficult patients would have to be transferred elsewhere, to be replaced by persons more suitable to the new freedom. Such transfers, while facilitating the opening of some wards, render the opening of others all the more difficult. Comparative data accumulated on this topic are found in Table No. 5.

TABLE NO. 5:
Effect of transfer of patients from other
wards on ease of opening ward.

	No. of wards reporting		
	(as represented in the survey) Canadian Hospitals	Central Warwick	St. Lawrence State
Easier to Open	132	5	1
More Difficult to Open	71	2	—
Depends on Patient	4	—	—
Transferred	104	14	10
No Effect	113	3	1
N/A	59	4	3
Reply Unclear	—	—	—

It would appear that the transfer (selection) of patients has played a definite role in making easier, or more difficult, the opening of wards in the Canadian hospitals surveyed.

* * *

A continuing question in the minds of many hospital staff is whether an open ward is suitable for the most difficult patients. One aspect of this was covered in answers to the previous question on transferring patients. However more direct data were sought and Table No. 6 indicates clearly that it is possible to accommodate many types of difficult patient on open wards and thus tends to substantiate the claims of open door enthusiasts that such patients do not abuse the privilege of freedom. However, it should be noted that the replies to the question are concerned only with a *policy* of admitting such *types* of patients and should not be interpreted as meaning that *any* alcoholic, criminal psychopath and so on, would be allowed to live on an open ward.

TABLE NO. 6:
Special types of patient admitted to open wards

Type of Patient	Open Wards Admitting in %		
	Canadian (as represented in the survey)	Central Warwick	St. Lawrence State
(a) Acutely Disturbed	10	39	44
(b) Criminal Psychopaths	8	56	33
(c) Psychopaths	26	63	67
(d) Sex Deviates	25	56	67
(e) Alcoholics	30	57	56
(f) Drug Addicts	22	56	56

Table No. 6 offers a comparison of the Canadian hospitals represented in the survey, Central Warwick and St. Lawrence State, in terms of the percentage of open wards admitting the more difficult types of patients. Since 40% of the wards in the United States hospital ap-

parently were not familiar with the terminology of the question and thus did not reply, the data for the column are relatively few.

Comparatively speaking, it is apparent that Canadian hospitals have fewer open wards admitting difficult patients than do the two reporting hospitals outside the Dominion. Caution must be used in the interpretation of the data, however, not only because of differences in use of diagnostic classification but in view of relatively greater variability in age and kind of patient surveyed in Canadian hospitals.

Another aspect of the same problem lay in the degree of freedom allowed 'difficult' patients who had been admitted to open wards. Questionnaire results indicate that for the Canadian hospitals, although doors may be open, difficult patients often are closely supervised (especially in the first week), often are allowed limited freedom in accordance with their clinical state but may be given the same freedom as other patients either immediately or after a short stay on the ward. Central Warwick and St. Lawrence State follow somewhat the same pattern although perhaps more inclined to allow greater freedom.

A summary of the above would indicate that many difficult patients can be accommodated on open wards but that immediate freedom is not a concomitant of placing on the ward. Thus the bothersome question as to whether the open ward is suitable for all patients has yet to be answered.

* * *

With considerably less attention paid to the comings and goings of patients and visitors where wards are open, the possible abuse of privilege is a matter of concern. Replies to the survey strongly suggest, however, that smuggling (drugs and alcohol) and theft do not become problems of any import under conditions of increased freedom. Furthermore, the ease with which the public can appear

on the ward did not lead to a problem of control of their activities—in nearly ten percent of the open wards, ease of access was found to be an advantage since staff did not have to unlock and lock doors.

* * *

Methods of control, less severe than locking ward doors, have been thought of and one of these is the ward 'leave book' to be signed when a patient leaves the ward. About 10% of wards surveyed apparently make use of such a leave book and of these, the majority give the patient responsibility for signing.

* * *

An interesting variation on the open door theme is where a patient, considered ready for the privilege, is given a ward key so that he may come and go as he sees fit. Such a procedure is close to the practice in private homes. However, the survey uncovered only three wards in Canadian hospitals where such action appeared to have been taken. Neither of the hospitals outside of Canada offers keys to patients.

* * *

In an earlier report, the present author (4) concluded that open door policy should be considered in terms of relative rather than absolute freedom. The survey looked into an aspect of this conclusion by trying to determine whether restriction has value for any psychiatric patient. Table No. 7 gives the data.

TABLE NO. 7:
Restriction of Patient has Value

	No. of Wards Reporting		
	(as represented in the survey) Canadian Hospitals	Central Warwick	St. Lawrence State
Yes	215	3	11
No	131	17	1
N/A	54	3	2
Answer Unclear	83	5	1

Of the 215 Canadian hospital wards where restriction was thought to have value, 99 reported that it tended to teach self-discipline, 67 that injuries (falls, and so on) were prevented, 30 that it helped the extremely disturbed patient (as well as those in contact with him).

It seems that the value of restriction still is a matter of opinion.

* * *

For many years it has been a practice in mental hospitals to make use of seclusion rooms for disturbed, recalcitrant patients. While the use of these rooms undoubtedly has declined, the survey explored the extent to which such rooms exist and are in use.

The data are not clear since what is and what is not a seclusion room depends upon the use to which it is put (e.g. some seclusion rooms are prized as private rooms; bedrooms sometimes are used as seclusion rooms). However, the present interpretation of the data suggests that 95 of 483 wards have at least one seclusion room and there are about 412 seclusion rooms all told. Occupation of seclusion rooms varies from once a year to continuously. Length of stay is three days or less in about 60% of the wards. In several cases, seclusion rooms appear to have been occupied continuously for years by the same patient.

Forty-seven wards reported that patients sometimes prefer to use a seclusion room for the sake of privacy or for better rest or when disturbed and afraid they will lose control.

Central Warwick reports six wards of 28 with a total of nine seclusion rooms which are rarely used (with one exception) and where length of stay usually is less than half a day. St. Lawrence State has no seclusion rooms.

Summary

The state of the 'open door' policy in Canadian mental hospitals has been assessed and the findings compared with a progressive British and a similar progressive United States hospital. Some of

the data are definitive but many important questions still await clear answers.

References

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2. Minutes of the 10th Meeting of the Advisory Committee on Mental Health, Department of National Health and Welfare, Ottawa, January, 1959.
3. Minutes of the 11th Meeting of the Advisory Committee on Mental Health, Department of National Health and Welfare, Ottawa, April, 1960.
4. Wake, F. R.: "The Open Door Philosophy—A Concept of Freedom". *Med. Serv. Journ.* Oct. 1959.

Résumé

En janvier 1959, la Commission consultative de l'hygiène mentale a demandé au ministère de la Santé nationale et du Bien-être social "... un exposé des progrès réalisés dans tout le Canada en ce qui regarde la question de la "porte ouverte" pour les hôpitaux psychiatriques." En conséquence, le Ministère s'est adressé par questionnaire aux hôpitaux psychiatriques provinciaux; vingt-six de ces hôpitaux ont répondu et ces réponses convenaient à une analyse. Ces données avaient trait à 483 salles dans les 26 hôpitaux de sept provinces. On donne aussi les détails relatifs à un hôpital britannique bien connu aux méthodes bien modernes ainsi qu'à un hôpital des Etats-Unis.

Le présent rapport reconnaît les difficultés qu'offre la validité des enquêtes par questionnaire et mentionne que l'auteur s'est permis de présenter la signification des données plutôt qu'une analyse circonstanciée mais non appréciatrice.

Les résultats font voir que, dans les hôpitaux canadiens qui ont fait rapport, les administrateurs, le personnel médical et les malades favorisaient l'ouverture des salles tandis que le personnel du nursing tendait à entretenir des avis partagés; dans l'ensemble, l'attitude du public était

favorable à l'ouverture des salles (ce qui est vrai également des deux hôpitaux ci-dessus mentionnés, en dehors du Canada); peu des hôpitaux déclarants avaient un programme d'essai pour l'ouverture d'autres salles et, ce qui est plus important, presque tous s'attendent qu'une ou deux salles soient fermées indéfiniment (aucun des hôpitaux d'en dehors du Canada ne s'attend à avoir de salles fermées à l'avenir); le genre "villa" ou "petite salle" favorise l'ouverture des salles tandis que les immeubles à trois étages présentent des difficultés; la moitié seulement des hôpitaux canadiens qui ont fait rapport croyaient que le climat y était pour quelque chose; des 483 salles, 220, soit 46 p. 100, étaient réputées "ouvertes" (les deux hôpitaux de l'étranger ont ouvert toutes leurs salles); il semble bien que de laisser plus de liberté, c'est-à-dire qu'il y ait plus de salles ouvertes, n'exige pas plus de surveillance de la part du personnel; le transfert (choix) des malades a joué un rôle qui a facilité l'ouverture de certaines salles dans les hôpitaux canadiens, et, inversement, a rendu la chose plus difficile pour d'autres; la question épineuse de savoir si le régime de la salle ouverte convient à tous les malades n'a pas encore reçu de réponse, la contrebande et le vol ne deviennent pas des problèmes sous le régime de la porte ouverte et l'accès facile par le public ne soulève pas non plus d'inquiétude; dix pour 100 seulement des salles ont mentionné l'emploi d'un "registre des congés"; dans trois salles seulement, on remettait la clé de la salle à des malades privilégiés; de savoir si les restrictions imposées sont utiles à quelque malade mental que ce soit demeure affaire d'opinion; bien que les données ne le précisent pas, pour environ 20 p. 100 des salles on a rapporté qu'il y avait une pièce de réclusion.



Book Reviews

Current Approaches to Psychoanalysis, edited by Paul H. Hoch and Joseph Zubin. Grune & Stratton, New York, 1960. Price \$6.

This book consists of papers and discussions from the annual meeting of the American Psychopathological Association of 1958. It is definitely on a level of excellence with their previous publications that have, for the most part, been valuable contributions to the psychiatric literature. As is inherent in a book with multiple authorship there is some variability from section to section but this is much less noticeable than is usually the case with this type of organization. Moreover, it lacks the clear cut imprint of the tape recorder that is usual with so many "conferences".

The presentation is broken down into three sections; Part I.: is concerned with theoretical approaches; Part II.: the clinical applications and Part III.: on evaluation. The first part on theoretic approaches of the various so-called analytical schools is of widest general interest.

Although the printed word may reflect poorly the heat of a discussion, it is refreshing to find the various concepts analysed on the basis of logic rather than dogma. After reading the all-inclusive expansiveness of some analytical writers one notes with interest the statements that "psychoanalytic therapy fits exactly the neuroses; but it fits only the neuroses so completely. Application of psychoanalysis to other psychopathological conditions cannot be taken for granted". (p. 1) This concept is again repeated by another author in defence of analytical concepts (p. 61) "psychoanalysis was developed as a theory of and treatment for the psychoneuroses and not for the psychoses".

There are several contributions that justify special comment. Clara Thompson on the Theoretical Framework of

the William Allison White Foundations provides one of the most lucid presentations of the concepts of Harry Stack Sullivan that has come to this reviewer's attention; Joseph W. Vollmerhausen does well with the concepts of Karen Horney; Lionel Ovesey in the discussion, presenting the approach of the Columbia University Psychoanalytic Clinic, reviews their acceptance, modification and rejection of Freudian postulates in a clearcut, organized fashion. The Samuel Hamilton Lecture by Bernard Glueck, Sr. on Psychoanalysis: Reflections and Comments is a scholarly and enjoyable story of the highlights of the development of psychoanalytical currents as viewed by a highly respected senior citizen who still "wishes to be known as a psychoanalytically oriented psychiatrist rather than primarily a psychoanalyst" and who has never allowed himself "to forget the indispensable linkage between medicine, psychiatry and psychoanalysis".

This book is to be recommended for those new to psychiatry who are trying to find their way among the various schools of analytical thought and for the older psychiatrist who is still anxious to remain an eclectic.

G. E. Hobbs, London.

Meaning and Methods of Diagnosis in Clinical Psychiatry, Thomas A. Loftus. Lea & Febiger, Philadelphia, 1960. \$5.00. 196 pages.

This is an extremely lucid and concise book on the problems of psychiatric diagnosis. In a small presentation limited to 196 pages Dr. Loftus has succeeded in bringing together the pertinent information on the meaning and method of arriving at a psychiatric diagnosis and a direct comparison of the psychiatric syndromes most likely to be confused.

The book begins with a chapter which clearly states the premises upon which our diagnosis is based. This is followed by two chapters on the taking of a psychiatric history and carrying out of a psychiatric examination. Here he essentially uses the framework of a medical history adapted for psychiatric patients. Finally he gives a breakdown of the characteristics of the various disorders outlined in the initial chapter under the heading recommended under history taking. An especially valuable contribution is a listing of the multiple euphemisms that describe the same condition and which have made psychiatry such a confusing area both for the undergraduate medical student in psychiatry and the early graduate student in psychiatry. The final section provides case histories presented in the form of an exercise.

This book would be most valuable for the graduate student and certainly should be in his library. It will save many months of floundering. For the undergraduate it could serve as a reference and for the more advanced psychiatrist an opportunity to check his concepts with a well thought out and documented presentation.

The criticisms are few. The author achieves well what he starts out to do. The only limitations on content that appear to this reviewer is that the early sections are written on an advanced level and the exercises more on the undergraduate level but this is a minor defect. The chief criticism is the cost.

G. E. Hobbs, London.

Handbook of Aging and The Individual, Psychological and Biological Aspects, J. E. Birren, Ed. University of Chicago Press, Chicago, Ill. 1959 XII and 939 pages. Price \$12.50.

This is the first of three handbooks on the psychological and social aspects of

aging. "The purpose was to prepare a handbook which would be an authoritative technical summary of the scientific and professional literature on the individual or behaviour aspects of human aging, with supporting information from infrahuman species." Thirty authors contributed to this volume. It has four main parts. The first: "Foundation of Research on Aging" contains a lucid and most interesting chapter by Birren on the "Principles of Research on Aging." This is followed by a philosophical essay by Reichenbach and Mathers on "The Place of Time and Aging in the Natural Sciences and Scientific Philosophy" and a third one by Landahl on "Biological Periodicities, Mathematical Biology and Aging." The medical reader will find the second part "Biological Bases of Aging" with chapters by Lansing, Himwich, Kallman, Gerard and others, most interesting. Busse deals clearly with the chapter on Psychopathology which, strangely enough, forms part of Section Three: "Aging in Environmental Settings" Section Four "Psychological Characteristics of Aging" is the most extensive and also the most comprehensive one of this handbook. The chapters on "Theories of Learning and Aging" by Kay and on "Intelligence and Problem Solving" by H. Jones bring data already known as well as new contributions in an interesting almost fascinating form.

It is impossible to deal with each chapter individually. However, it is fair to say that this handbook although written by 30 people maintains not only a high level of presentation throughout, but, perhaps more important, the same line of orientation toward the central problem, the aging individual's behaviour, its causes and consequences. Dr. Birren and his co-workers have certainly made a notable contribution to gerontological research.

V. A. Kral, Montreal.



Correspondence

To the Editor, Cdn. Psych. Assoc. Journ.

Through the columns of your Journal, I would like to call the attention of the membership of the Canadian Psychiatric Association to the setting up by the Federal Government of the Royal Commission on Health Needs. This, as you are aware, followed a request for such a Commission put forward by the Canadian Medical Association. Special note should be made of the wording of the Canadian Medical Association's letter to the Prime Minister and I quote.

"I am therefore directed to request that there be established a Royal Commission or other agency under the authority of Part I of the Enquiries Act for the purpose of assessing the health needs and resources of Canada with a view to recommending methods of insuring the highest standard of health care for all Canadians."

This is not then a Commission to develop a health insurance plan but rather one to make a comprehensive study of Canadian health needs and resources and the best way in which the needs can be met. Surely no one can deny that our field of medicine—psychiatry—whose patients occupy more than 50% of Canadian hospital beds and whose patients by conservative estimates make up at least 30% of every G.P.'s office practice—should occupy major attention in such a survey.

In opposition to such a common sense attitude is what happened in Saskatchewan in the extensive brief of the Saskatchewan Division of the Canadian Medical Association in which eleven different specialties are mentioned and mental health is passed off in these words.

"The very nature of tuberculous care, cancer treatment services, *mental health services*, and programs for the chronically ill dealing as they do with patients experiencing social economic stress and

requiring special care over long periods impels us to suggest that these programs be not fundamentally changed but rather that they be further aided in carrying out their essential work."

On Page 30 of the brief there is reference to "the ideal mental health program" but I have reason to believe that this represents only an extension of the pattern of services now offered. I understand that there have been one or two other briefs presented by psychiatric groups in Saskatchewan, but I have not been able to lay my hands on these; and they certainly were not presented with the backing of general medicine as were briefs from the other specialties. I have raised these issues with the Executive Committee of the Canadian Medical Association, and I have reason to believe that that body would support our Association in reasonable requests for new and better patterns of coping with this huge problem of mental illness.

I would submit, Sir, that no plan which does not recognize the rapid growth of community psychiatry, general hospital psychiatry, and private practice is adequate for this country; and it would be my belief that these facilities outside the mental hospital offer the greatest hope for a reasonably high quality psychiatric service to the people of Canada at a cost that they can afford. At this moment then I feel that what we do will determine the future of Canadian psychiatry. Either we acquiesce with the viewpoint simplified in the Saskatchewan brief and plan future psychiatry as a Department of Health-Governmental service with all that implies *or* we insist that modern psychiatry is a branch of medicine and that psychiatric practitioners and their patients should be treated the way other doctors and sick people are in Canada. To accomplish this, we must insist that in any future planning for the health

needs of the Canadian people specific consideration be given to the most prevalent form of human illness—namely that which lies in the psychiatric field.

Specifically then we must:—

1. Convince the Royal Commission that mental health is one of the major areas of disease in Canada with the greatest needs and at present almost the poorest resources.
2. That these needs are not being met at present and that mere extension of present facilities will *not* give high-quality medical services.
3. That new patterns of psychiatric care are urgently needed and that the full exploration of all proposals for such new patterns should be a major item of concern for the Royal Commission.
4. That such proposals should come from the Canadian Psychiatric Association—the organization which presumably includes the most knowledgeable Canadian experts in the mental health field.
5. To achieve this, every provincial division of the Canadian Psychiatric Association as well as the national body should immediately organize to obtain information and prepare a brief for provincial and national presentation to the Royal Commission. The Canadian Psychiatric Association at both the national and provincial level should work closely with the Canadian Medical Association at the same level. Submissions should be channelled through general medical organizations so that we may have their backing and should be channel-

led through our national organization to provide some degree of communication. This does not mean that every province has to ask the same thing because it is quite obvious that different provinces may have different health needs; but we should certainly be able to agree on our general principles. To accomplish this purpose will require hard working committees—not meeting occasionally every few months for a few hours of desultory chatter but sitting down many hours each week. Above all, such committees will have to have the guts to examine critically and without the prejudice which is so apparent in our field what is now being done, how satisfactorily it is being done, and after a thorough examination of *all* ideas and presently existing arrangements to courageously prepare and recommend a plan for the psychiatric care of Canadians which will assure high quality services for this large group of patients coupled with a mode of professional life which will not only satisfy present psychiatrists but will attract more and better people into our specialty than we currently have.

This, Mr. Editor, is a terrific challenge to Canadian psychiatry in 1961. The health and happiness of millions of Canadians of the present and in the future depends on how we meet it.

Yours very truly,

Robert O. Jones, M.D.,
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